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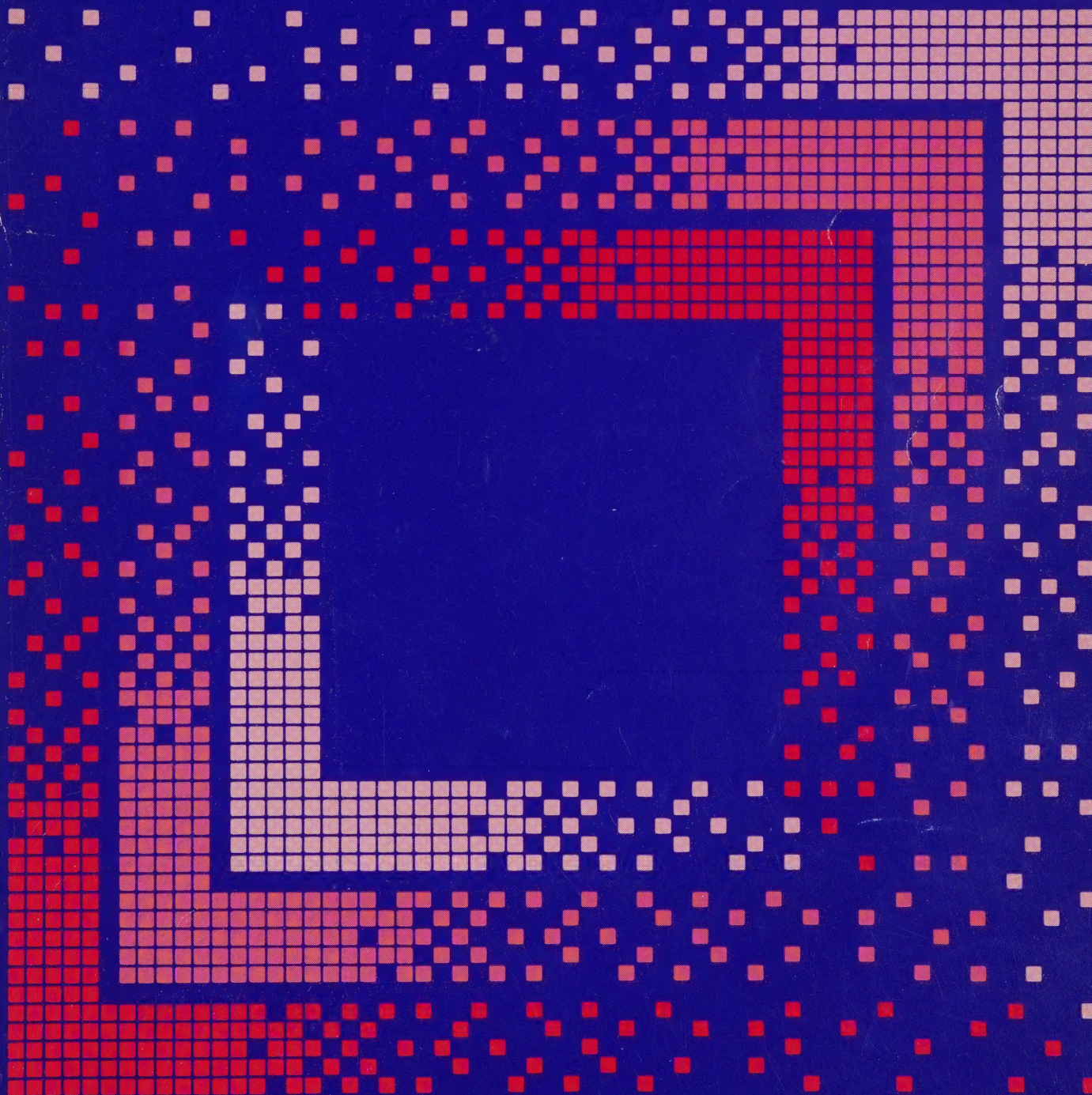
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3

Accidents in Canada

Wayne Millar

Owen Adams



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PREFACE

The General Social Survey has two principal objectives: first, to gather data on social trends in order to monitor changes in Canadian society over time, and second, to provide information on specific social issues of current or emerging interest.


The third annual cycle of the General Social Survey, which collected data during January and February 1988, concentrated on the personal risk of criminal victimization and accidents. A data file from this survey was released in March 1990. This report examines the findings of the accident portion of the survey based on an analysis of the released data.

Accident statistics are available from a variety of sources: hospital morbidity data, workers' compensation data, workers' accident and injury data and vital statistics are all potential sources of data relating to accidents in Canada. However, many accidents that occur are not reported by these programs and information can only be obtained directly from accident victims as reported in a general population survey. The data in this report are unique because they complement the existing statistics and they provide insight into the social and demographic characteristics of Canadians who have experienced an accident in the home, at work, during recreation, or on the road during the year preceding the survey. This is the first national survey to focus on such a broad range of accidents and their implications. Many of these incidents are not recorded elsewhere. Consequently, the information is potentially important for policy makers, legislators, academics and persons involved with prevention programs.

In recognition of the broad scope of the data being produced by the General Social Survey, as well as the wide range of expected users from governments, universities, institutes, business, media and the general public, the project has placed particular emphasis on access to the survey database. In addition to this report, the project has produced a public use microdata file that will allow researchers to carry out their own analysis of this rich database. Copies of this microdata file can be obtained by writing to the Housing, Family and Social Statistics Division, Statistics Canada.

This report was written by Wayne Millar and Owen Adams of the Canadian Centre for Health Information. Edward Praught was the manager for the General Social Survey Cycle 3.

Ivan P. Fellegi
Chief Statistician of Canada



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CHAPTER 1

INTRODUCTION

1.1 HIGHLIGHTS OF THE REPORT

The third General Social Survey, carried out in January and February 1988, collected information on two types of personal risk - the risk of accident and criminal victimization - from 9,870 people age 15 and over. The sample covered the non-institutionalized population throughout the 10 provinces. The data were gathered by telephone with a response rate of approximately 82%.

The 1988 General Social Survey collected the following types of information: attitudes to various components of the justice system; awareness of victim services; perception of risk with regard to accidents and crime incidents; and information on the kind and number of times the respondent had been involved in an accident or a crime incident during 1987. Each time an accident or criminal victimization was reported, a report was completed collecting details about the incident. In total, 2,404 Accident Incident Reports and 3,808 Crime Incident Reports were completed.

The current presentation covers only the accident data; crime victimization data are covered in a separate report.¹

Social and Environmental Factors (Chapter 2):

- An estimated one in five Canadians (3.8 million people) reported having had at least one accident in 1987. In total, these people reported 5.1 million separate incidents.
- Motor vehicle/traffic accidents accounted for one in three incidents reported. Those which occurred while participating in a sports or leisure activity were the next most frequently reported accidents (23%), followed by work-related accidents (21%). Just over one in ten accidents occurred in or around the home (13%).
- People who drank alcohol on a regular basis were more likely to have experienced one or more accidents in the past three years, than those who did not.
- Accident rates tended to be higher in the western provinces.

Consequences of Accidents (Chapter 3):

- Accidents resulted in one or more of the following consequences: personal injuries (79%), hospital care (45%), activity-loss days (79%), or financial loss (39%).
- Almost one out of two accidents resulted in hospital care (45%). In the majority of cases, however, this care was obtained on an out-patient basis, such as in a hospital emergency department. Fewer than one in ten resulted in an overnight stay in hospital (8%).

- In 1987, approximately 51 million activity-loss days, nine million bed-disability days and two million hospital days were attributable to accidents.
- Of all accidents, 36% resulted in the victims' spending one or more days in bed. Accidents in and around the home were somewhat more likely than other types to result in bed-days.
- In 1987, two out of three motor vehicle/traffic incidents resulted in financial loss (66%). Canadians paid approximately 1.1 billion dollars in personal out-of-pocket expenses for accidents. About one out of five sports-related accidents and home accidents resulted in financial loss (19% and 23%, respectively).

Prevention of Accidents (Chapter 4):

- Of the total population, one out of two accidents (52%) was viewed as being the result of carelessness or unsafe activity. In the remaining incidents, respondents stated that the accident was something that could not have been predicted or avoided.
- Personal carelessness was cited by 26% of respondents reporting work-related accidents. In 8% of work-related accidents, the victim stated that unsafe working conditions were responsible for the event.

Overview of Accident Types (Chapter 5):

- In 1987, Canadians reported 1.7 million motor vehicle/traffic accidents. These accidents represented 33% of all incidents.
- Of all motor vehicle accidents, 45% occurred to people under age 25. Thirty-one percent of all motor vehicle accidents involved men age 15-24.
- Almost two out of three (65%) work-related accidents resulted in hospital care.
- About 60% of all work-related accidents happened to people age 25-44.
- Work-related incidents were responsible for 39% of all spine and back injuries.
- Approximately 17 million days of activity-loss, 2.5 million days of bed-disability and, .4 million in-patient hospital days resulted from work accidents.
- Of all sports accidents, 65% occurred to men. Of these incidents, 38% were reported by men age 15-24.
- Falls comprised about 43% of all home accidents. With increasing age, falls constituted an increasing proportion of all incidents.

1.2 OVERVIEW

OBJECTIVES

The General Social Survey was initiated by Statistics Canada in order to reduce gaps in the statistical information system, particularly in relation to socio-economic trends. Many of these gaps could not be filled through existing data sources or vehicles because of the range or periodicity of the information required, or the lack of capacity of relevant vehicles.

The General Social Survey has two principal objectives: first, to gather data on trends in Canadian society over time, and second, to provide information on specific policy issues of interest. To meet these objectives, the General Social Survey was established as a continuing program with a single survey cycle each year.

CONTENT

The General Social Survey (GSS) gathers a wide variety of data to meet different kinds of unmet needs involving a very broad spectrum of users. To achieve the objectives outlined above, the GSS has three components: Core, Focus and Classification.

Core content is directed primarily at monitoring long-term social trends by measurement of temporal changes in living conditions and well-being. Main topics within Core content include health, education and work, social environment, the family and personal risk. As all Core content topics cannot be treated adequately in each survey cycle, a single cycle covers a specific topic, which recurs on a periodic basis. The Core content of the 1988 General Social Survey was personal risk - the risk of accident and criminal victimization. Focus content dealt with criminal victimization issues.

Within a typical survey cycle, data on the status of the Canadian population, in terms of the Core topic are collected, as well as data on factors which act as barriers and bridges to improving this status. Thus, in Cycle 3, data on determination of accident status was collected, as well as data on lifestyle factors which could act as barriers and bridges to personal risk.

Classification content provided the means of delineating population groups and was used in the analysis of Core and Focus data. Examples of classification variables are age, sex, education and income.

This report covers only the accident component of the survey. A separate publication covers the criminal vic-

timization data. In this report, Chapter 2 deals with selected social and environmental factors associated with accidents. Chapter 3 focuses on the consequences of accidents in terms of injury, disability, and out-of-pocket expenses. Chapter 4 presents findings relating to public perception of the preventability of accidents and the perception of personal risk. Chapter 5 provides a more detailed perspective by type of accident. Because of the broad scope of the survey, this report can only present an overview of the data collected and indicate the potential of the data base. A public use microdata tape is available to facilitate further analysis. To purchase this tape or for further information, please contact: General Social Survey Project, Housing, Family and Social Statistics Division, Statistics Canada, Ottawa K1A 0T6 (Telephone (613) 951-9180).

SAMPLE DESIGN

The target population of the 1988 General Social Survey consisted of all people 15 years and over living in the 10 provinces of Canada, with the exception of full-time residents of institutions. The population was sampled using random digit dialling techniques and interviewed by telephone, thus excluding from the sample those persons living in households without telephones. These households account for less than 2% of the target population. The sample was allocated to provinces in proportion to the square root of the size of their populations, and to strata within provinces in proportion to their population.

The total sample size of 9,870 persons is large enough to allow extensive analysis at the national level, some analysis at a regional level, but only very limited analysis at a provincial level. Disaggregation, even at the Canada level, is restricted for the investigation of specific types of accidents or injuries with low frequency of occurrence.

Appendix III contains additional information on the sample design and estimation procedures.

DATA COLLECTION AND FORMS

Data collection took place in January and February 1988. Data were collected from 9,870 respondents age 15 years and over. There were 2,110 non-responses, for a total sample size of 11,980. Copies of the questionnaires used are shown in Appendix II.

The Selection Control Form (GSS 3-1) was used to ensure that the telephone number reached belonged to an eligible household, to record some demographic data for each household member (age, sex, marital status and relationship to a reference person) and to randomly select a

respondent aged 15 and over. Only one respondent was selected per household. The Personal Risk Screening Questionnaire (GSS 3-2), composed of the Core content questions and the majority of the Focus content questions, was then administered. No proxy responses to the questionnaire were accepted. The screening questions in Section C of the GSS 3-2 determined whether an Accident Incident Report (GSS 3-3) should be completed. **Only accident incidents which occurred in 1987 and interrupted the respondent's normal activities for at least half a day, or caused expenses of at least \$200 were to be reported.**

This conceptual definition of an accident is problematic because the connotation of an accident implies an event that is by its very nature not predictable or preventable. In the view of the public, "accidental events" also tend to be associated with carelessness, inattention or risk-taking on the part of individuals. Consequently, the use of the word accident may tend to shift preventative activities towards the modification of individual behaviour to the exclusion of environmental, technological and other complex factors related to unintentional injury.² The definition also mixes events which caused personal injury with those that caused a financial loss.

The categories of accidents employed in the survey are not naturally mutually exclusive. It is possible to have a sports accident in a vehicle. Similarly, if a person operated a business from the home, a work accident could be also defined as a home accident. To deal with the problem of dual counting of events, a hierarchy of accidents was established. An empirical investigation showed very little overlap, only 9.1% could not be uniquely classified. Motor vehicle, work, home and sports accidents were assigned priority for the purposes of classification. If a motor vehicle accident occurred while at work, it was termed an MVA event. This procedure will have the effect of reducing work accident rates and increasing motor vehicle accident rates. However, it was possible to determine the proportion of motor vehicle accidents that occurred while at work by the question "did this accident occur while at work"? Events that did not fall into the categories of motor vehicle, work, home or sports accidents were classified into a residual category called "unclassified".

The Accident Incident Report categorized the incident by month and time of day of occurrence, by location and type. Additional questions on impact obtained data related to compensation, medical care, hospitalization, dis-

ability days, and attitudes toward prevention.

DATA PROCESSING AND ESTIMATION

Data capture personnel in the Statistics Canada regional offices keyed data directly from the survey questionnaires into mini-computers. These data were then transmitted electronically to Ottawa. All survey records were subjected to an extensive computer edit. Partial non-responses, flow pattern errors and abnormally high or low responses were identified. Missing or incorrect data were recorded as "not-stated" or, in a very few cases, imputed from other areas in the same questionnaire.

Each person in a probability sample can be considered to represent a number of others in the surveyed population. In recognition of this, and utilizing sample design information, each survey record was assigned a weight that reflected the number of individuals in the population that the record represented. These weights were adjusted for non-response and for the differences between the target population and the surveyed population using population counts for the target population. The estimates presented in this report were calculated using the adjusted weights.

Incidents were also assigned weights. Incidents were given weights adjusted for the fact that some respondents had more than one accident. The total number of accidents was calculated by accumulating the accident incident weight multiplied by the number of incidents the report represented. More information on the sampling and estimation procedures can be found in Appendix III.

DATA LIMITATIONS

It is important to recognize that the figures which appear in this report are estimates based on data collected from a small fraction of the population (roughly one person in 2,000) and are subject to error. The error can be divided into two components: sampling error and non-sampling error.

Sampling error is the difference between an estimate derived from the sample and the one that would have been obtained from a census that used the same procedures to collect data from every person in the population. The size of the sampling error can be estimated from the survey results and an indication of the magnitude of this error is given for the estimates in this report. Figure A shows the relationship between the size of an estimate and its sampling error (expressed as the coefficient of variation: the ratio of the standard deviation to the estimate). If the estimated sampling error is greater than 33% of the estimate, it is considered too unreliable to publish and the

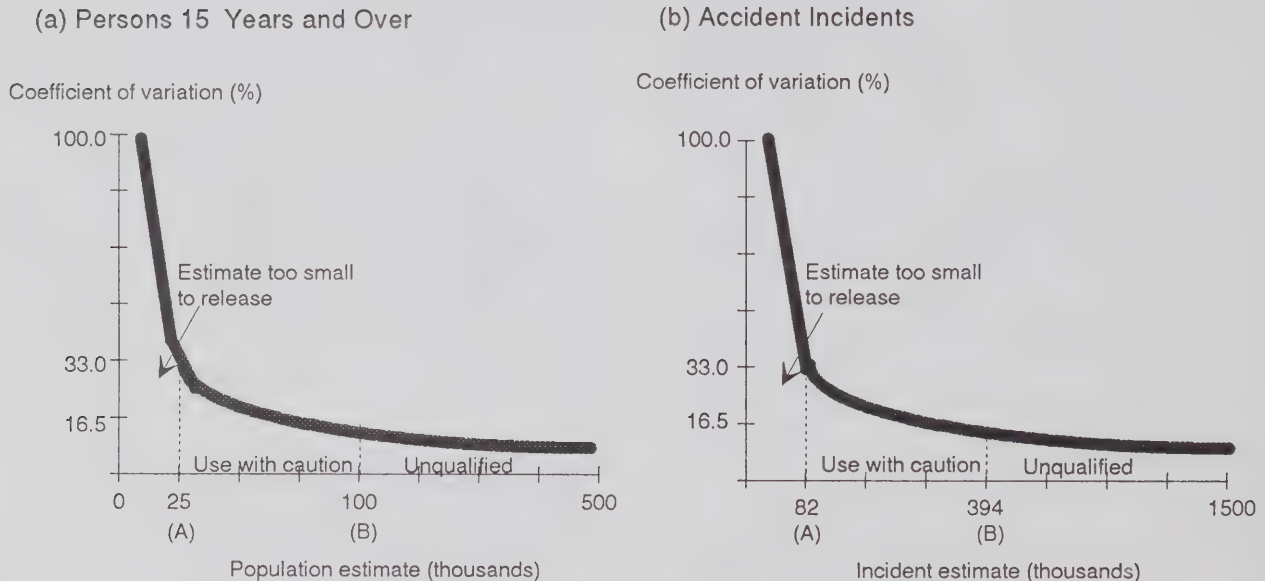
symbol "--" is printed in table cells where this occurs. In terms of Figure A, all estimates below point (A) on the estimate axis (population or incident) fall into this "unreliable" category. Although not considered too unreliable to publish, estimates with an estimated error between 16.5% and 33% of the related estimate should be "qualified" and used with caution. All estimates between points (A) and (B) on the estimate axis of Figure A fall into this "qualified" category.

All other types of errors, such as coverage, response, processing, and non-response, are non-sampling errors.

Many of these errors are difficult to identify and quantify.

Coverage errors arise when there are differences between the target population and the surveyed population. Households without telephones represent a part of the target population that was excluded from the surveyed one. To the extent that this exclusion differs from the rest of the target population, the estimates will be biased. Since these exclusions are small, one would expect the biases introduced to be small. However, since there are correlations between a number of questions asked on this survey and the groups excluded, the biases may be more

Figure A
Estimated Sampling Variability by Size of Estimate, Canada



Note: Only coefficients of variation (c.v.) applicable to estimates for Canada as a whole are shown in Sections (a) and (b) of Figure A. The difference between the true population (incident) size and the estimated population (incident) size (expressed as a percentage of the estimate) will be less than the c.v. 65% of the time, less than twice the c.v. 95% of the time and less than three times the c.v. 99% of the time. For estimates that include persons, use Section (a), while for estimates that include incidents, use Section (b).

significant than the small size of the groups would suggest.

A number of limitations in the survey design imposed constraints on the analysis of the data. Individuals residing in institutions were excluded from the surveyed population. The effect of this exclusion is greatest for persons 65 years and over, where it approaches 9% of this age group. People who are institutionalized tend to be older and are more likely to be admitted for injuries. Consequently the estimates of injury rates and the sequelae of injury will be underestimated.

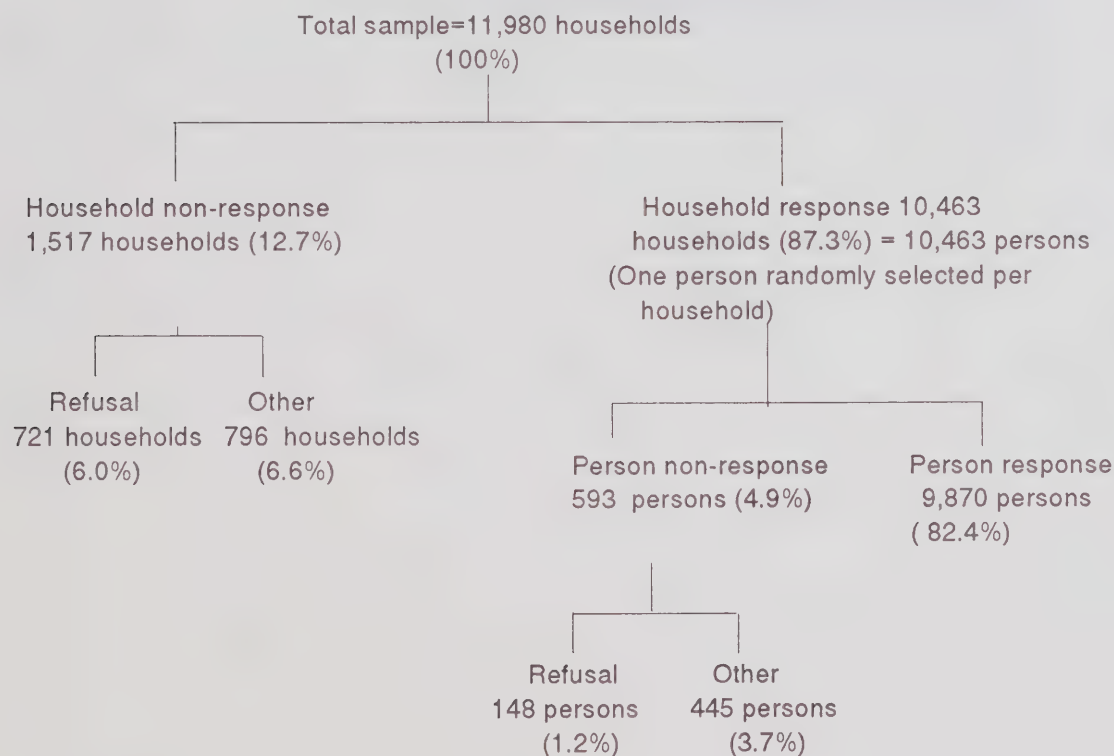
In a similar way, to the extent that the non-responding households and persons differ from the rest of the sample, the estimates will be biased. The overall response rate for the survey was 82.4%. Non-response could occur at several stages in this survey. There were two stages of information collection: at the household level and at the indi-

vidual level. As is shown in Figure B, about 72% of the non-response occurred at the household level. Non-response also occurs at the level of individual questions. For most questions, the response rate was high and, in tables, the non-responses appear under the heading "not stated".

While refusal to answer specific questions was very low, accuracy of recall and ability to answer some questions completely can be expected to affect some of the results presented in the subsequent chapters. Awareness of exact question wording (Appendix II) will help the reader interpret the survey results.

The survey was conducted in January and February of 1988. Respondents were asked to recall injuries over the course of 1987 and, in some cases, over a three-year period. This may lead to two types of bias. The probabil-

Figure B
Response Magnitudes and Rates



ity that an accident and a resulting injury would be recalled is dependent on the salience of the event to the respondent and the time since the event. Injuries that were minor in nature would be less likely to be recalled. Consequently, the estimates of minor injuries are likely to be under-reported.

Injury patterns vary substantially over the course of the life cycle. This implies a consideration of injury patterns by detailed age groups. Although the sample size was 9,870 persons, the size was not sufficient to produce estimates for all variables of interest that meet acceptable reliability levels.

The timing of the survey would ensure that more recent events would be recalled more accurately than events in the past. As a consequence, the seasonal distribution of accidents may be biased toward the time in which the survey was conducted. Reliance on a monthly recall data collection system would probably produce more accurate estimates. This data collection procedure is presently used by the National Centre for Health Statistics in the United

States and is being considered for future General Social Surveys.

Recall is also likely to influence the estimation of the economic costs of accidents. One question asked respondents to calculate their out-of-pocket expenses. This question refers to expenses such as the deductible on insurance policies, transportation costs, drug expenses, medical expenses that were not covered by insurance and entail direct expenditures by the respondent. Depending on the time since the event, many respondents may have found it difficult to accurately recall this information.

Since the survey is cross-sectional, caution is required in making causal inferences about the association between variables. Observed associations may be a reflection of differences between cohorts, period effects, differences between age groups or a combination of these factors.

NOTES

1. Statistics Canada, *Patterns of Criminal Victimization in Canada*, General Social Survey Analysis Series, Catalogue 11-612 No.2.
2. Julian Waller, "Injury: Conceptual Shifts and Preventive Implications", In *Annual Review of Public Health*, 1987; 8:21-49.

CHAPTER 2

ACCIDENTS

SOCIAL AND ENVIRONMENTAL FACTORS

2.1 ACCIDENT PREVALENCE

HIGHLIGHTS

- In 1987, 27% of all accidents (1.4 million) were reported by young men age 15-24.
- Among seniors age 65 and over, 70% of accidents involved women.
- Motor vehicle accidents were the most common incident reported followed by sports, work and home accidents.
- Accident rates for men were higher than for women, for all types of accidents, except those occurring in the home.

METHODS

The classification scheme used to derive "the type of accident" variable is hierarchical in approach and is mutually exclusive and exhaustive. Only information from the Accident Report (GSS 3-3) was used to make this classification. Accidents involving a car, van, truck, motorcycle or an all-terrain vehicle were classified as motor vehicle accidents (F7). The definition of motor vehicle accident was inclusive of traffic and non-traffic accidents, as the size of the sample precluded separation into more detailed categories. Work-related accidents include those incidents that occurred at the re-

spondent's place of work (F10). Place of work was defined as the place where the respondent spent most of his/her working day. In some instances, it may have meant working at home, on the road or outside. Work accident rates were calculated using estimates of the average annual employed population from the Labour Force Survey.¹ Accidents that occurred while the respondent was engaged in sport or recreational activity were classified as sports accidents (F13). Home accidents were defined as accidents that occurred in homes, including apartments and boarding homes, and their immediate surroundings (Categories 1 through 5 of F15). The unclassified category includes all incidents which could not be classified in one of the above categories or for which insignificant information existed to make a classification.

RESULTS

General Risk of Accident

In 1987, 19% of adult Canadians had at least one accident (Table 1). Only 4% of the adult population were involved in two or more accidents.

In all age groups, with the exception of the 65 and over age group, a higher percentage of men reported accidents. With increasing age, the proportion of people who experienced an accident declined. This trend was apparent for both men and women. As well, more people age 15-24 reported single and multiple accidents than others. While 11% of people age 15-24 reported two or more incidents, only 2% of those age 25 and over reported multiple incidents.

TEXT TABLE A :
Proportion of accident incidents by type of accident, sex and age group, Canada, 1987

Sex and age group	Total accidents	Motor vehicle/traffic	Work related	Sports related	Home and surroundings	Unclassified
	%					
Both sexes						
All age groups	100	33	21	23	13	10
15-24	100	36	13	34	8	10
25-44	100	32	29	18	13	7
45-64	100	34	23	--	18	16
65+	100	--	--	--	45	--
Males						
All age groups	100	35	25	25	8	8
15-24	100	38	15	33	--	8
25-44	100	31	34	21	7	6
45-64	100	37	33	--	--	--
65+	--	--	--	--	--	--
Females						
All age groups	100	31	14	20	21	14
15-24	100	31	--	34	12	13
25-44	100	34	21	14	23	--
45-64	100	31	--	--	--	--
65+	100	--	--	--	--	--

Motor vehicle accidents accounted for one out of three accidents reported (Text Table A). Sports accidents were the next most frequently reported accident (23%), followed by work-related (21%) and accidents around the home (13%). The remaining incidents were unclassifiable.

Motor vehicle accidents accounted for 35% of the total among men. Sports and work-related accidents each accounted for one quarter among men, followed by those in the home and unclassified accidents (8% each). For women, 31% of accidents involved motor vehicles, 21% occurred in the home, and 20% were sports-related. Work and "unclassified" accidents each accounted for 14% of all incidents among women.

The distribution shows a close association between accidents and the life cycle of Canadians. In the younger age groups, motor vehicle and sports accidents represented a major proportion of all accidents. After age 24, sports accidents diminished in their relative importance. Work-related accidents contributed a larger share of all accidents in the 25-44 age range. For both men and women, home accidents increased in relative importance with

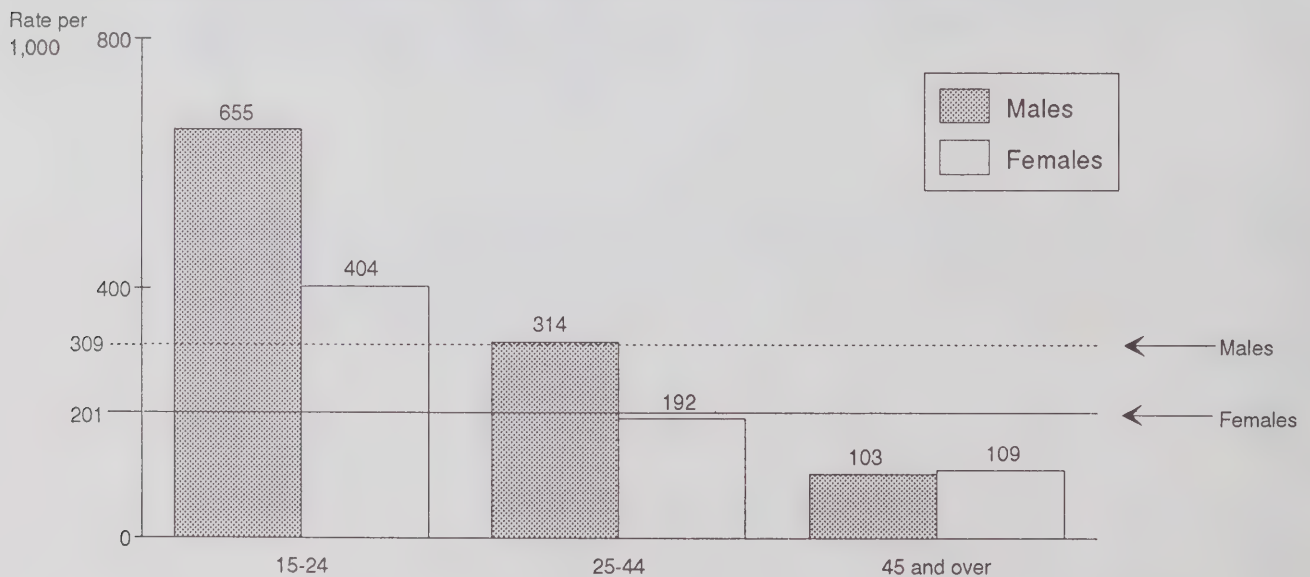
age. In the 65 and over age group, the highest percentage of all accidents occurred in the home environment. Motor vehicle accidents represented a substantial percentage of all accidents among men up to age 64. Among women, motor vehicle accidents were also important at all ages.

Among both men and women, peak rates for accidents occurred in the 15-24 age group (Table 2, Figure C). After age 24, rates tended to decline with advancing age. Young men age 15-24 experienced rates that were twice the rate of men age 25-44, and five times the rate of men age 45-64. Up to age 45, accident rates for men exceeded those of women while the reverse was true for seniors.

Accident Rates by Type of Accident

The highest rate among men was 107 per 1000 population for motor vehicle accidents, followed by 78/1000 for sports, 77/1000 for work accidents and 25/1000 for home accidents (Table 2). For women, rates were highest for motor vehicle accidents (62/1000) followed by home (42/1000), sports (40/1000) and work (28/1000).

Figure C
Accident rates per 1000 population by age group and sex, Canada, 1987



General Social Survey, 1988

DISCUSSION

A review of accident mortality in Canada, between 1926 and 1985, concluded that, in absolute terms, there has been only a small net increase in accident mortality. However, the relative importance of accidents as a cause of mortality has increased due to the diminished importance of other causes of death. The proportion of total mortality due to accidents, injuries and violence among men age 15-34 increased from 25% in 1926 to 72% in 1985. Corresponding percentages for women age 15-34, over the comparable time period, were 4% and 50%,² respectively.

Data from vital statistics indicate that in 1987, 13,000 persons age 15 and over died as a result of an accidental injury.³

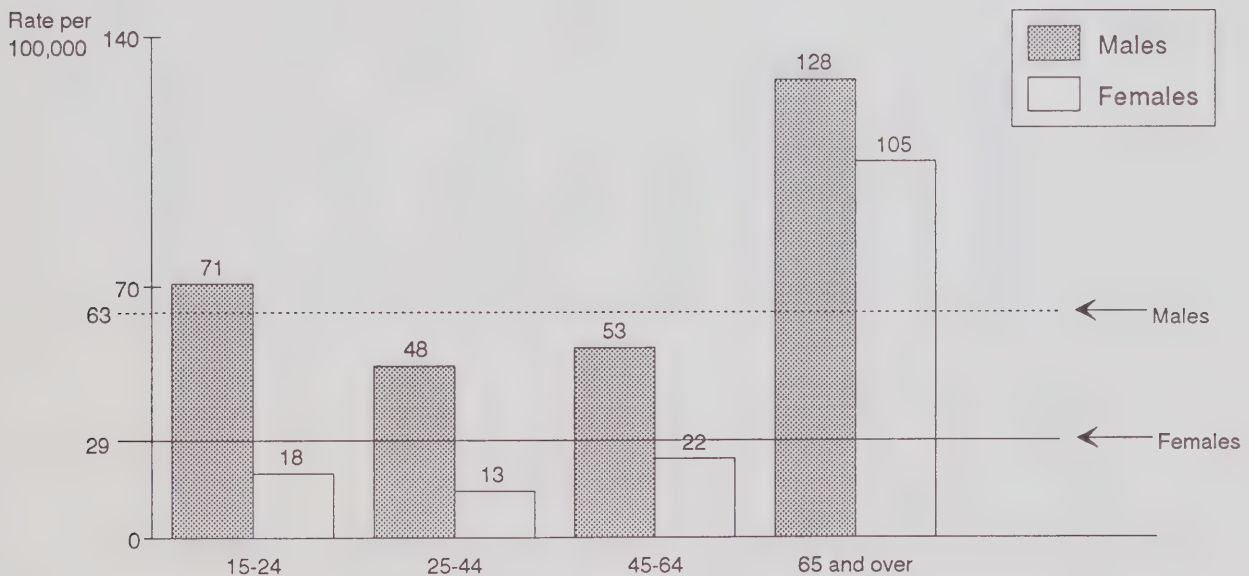
Accidental death rates were highest in the 15-24 and 65 and over age groups (Figure D). This pattern was evident for both men and women. However, accident mortality rates for men were higher than the rates for women, in all age groups. Among both men and women, the 65 and over age group had the highest accident

mortality rates. Although rates were highest in the oldest age group, accident deaths represented only 2.3% of all deaths among elderly people. In contrast, accidental deaths represented 71% of all deaths in the 15-24 age group.

Adolescents and young adults are at higher risk than their elders for accidents of all types. This fact warrants further investigation to determine the behavioural and environmental factors responsible for higher accident rates. In a number of American states, attempts have been made to cut down on the number of highway accidents by restricting adolescent drivers to daylight hours.⁴ Some states have raised the age at which youth may operate motor vehicles.⁵

The increasing importance of accidents as a cause of death combined with the financial costs of unintended injuries and toll on personal suffering, has led to an increasing awareness among public health workers of the need to prevent unintentional injuries. If accidents are considered from a demographic or epidemiological perspective, one could argue that accidents that occur in the younger age groups are more important because of their impact on life expectancy or on the potential years of life lost by people who die as a result of an accident.

Figure D
Accidental death rates per 100,000 population by age group and sex, Canada, 1987



On the other hand, older people are more likely to die as a result of a chronic disease such as ischemic heart disease or cancer than accidents. However, those accidents that do occur among the elderly may have far reaching consequences not only for the quality of life, but also for health care costs.⁶

The impact of accidents on premature mortality, lost activity days, hospitalization and medical care costs is an incentive to investigate the behavioural and environmental factors associated with unintentional injury. Accidents, a large proportion of which occur in the home environment, are a threat to the independence of the elderly and a factor in increasing hospital and chronic care facility costs.

NOTES

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2.2. REGIONAL AND SEASONAL FACTORS

HIGHLIGHTS

- For both men and women, total accident rates in British Columbia were the highest in Canada. British Columbia had the highest accident rates for all types of incidents.
- In all regions, accident rates for men exceeded those of women.
- There was a seasonal pattern to accidents: most occurred in the summer months.
- Accidents varied by the time of day in which they occurred: the majority (68%) occurred in the daylight hours and of those, most occurred in the afternoon.

regions, were combined for both sexes due to sample size limitations.

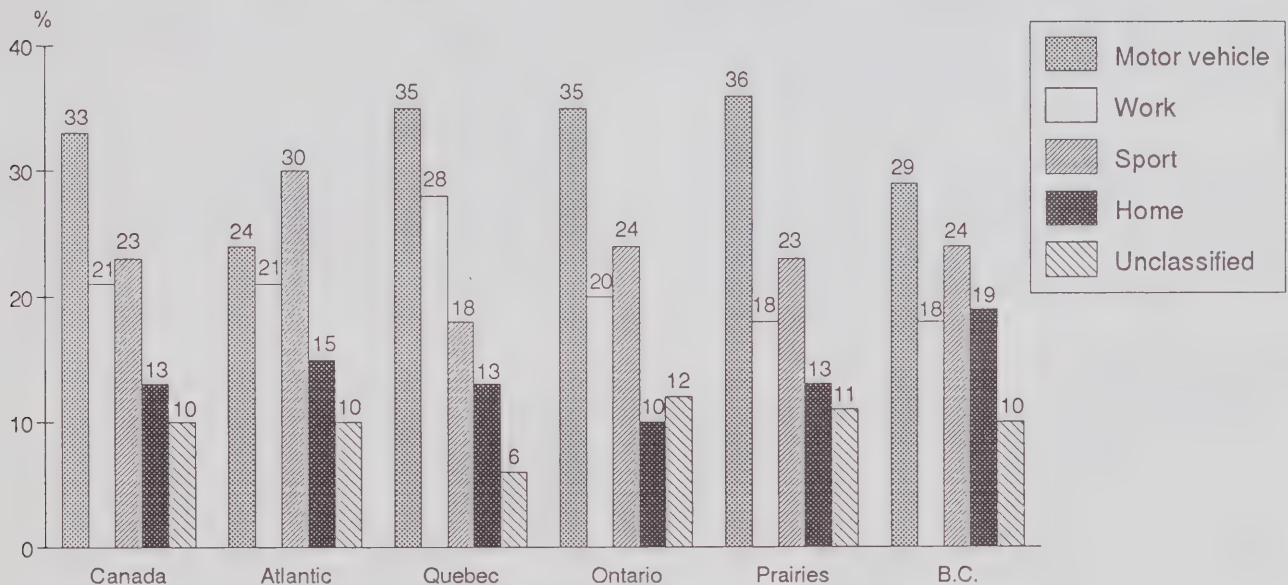
RESULTS

Regional Comparisons

In all regions, except the Atlantic, motor vehicle accidents represented the largest proportion (29%-36%) of all accidents (Table 3, Figure E). In the Atlantic Region, sports accidents accounted for the largest share of all accidents (30%). The relative importance of home accidents varied substantially by region: in Ontario, home accidents represented 10% of all accidents compared to 19% in British Columbia.

In the Atlantic Region, Quebec and Ontario, age-standardized rates for men and women were lower than the national average (Figure F). In contrast, these rates for

Figure E
Proportion of accidents by type of accident and region, Canada, 1987



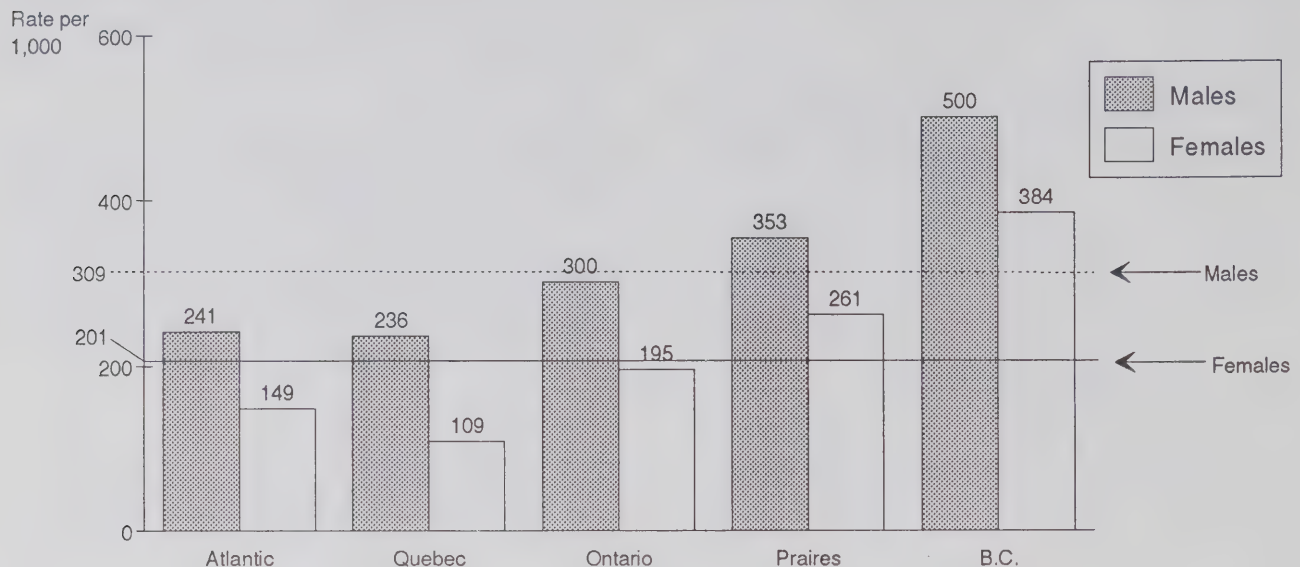
General Social Survey, 1988

METHODS

As variations in crude regional accident rates may reflect differences in age distributions, all regional comparisons were based on rates that were age-standardized against the population of Canada. Separate standardizations were made for men and women. Age-standardized comparisons of accidents by type of accident, within

men and women, in the Prairie Region and British Columbia surpassed the national average. In all regions, age-standardized rates for men were greater than for women.

There was evidence of an accident rate gradient as one moved from east to west. From Quebec west, men and

Figure F**Age-standardized accident rates per 1000 population by region and sex, Canada, 1987**

General Social Survey, 1988

women, in each subsequent region, had progressively higher accident rates. British Columbia stood out with the highest accident rates in Canada, for both men and women. In contrast, rates were lowest in Quebec.

East-west gradients in age-standardized accident rates were most pronounced for sports and motor vehicle accidents (Text Table B). In the Atlantic Region, the motor vehicle accident rate was 47/1000 compared with 85/1000 in Ontario and 130/1000 in British Columbia.

Sports accident rates in the Atlantic Region were 58/1000 compared with 59/1000 in Ontario and 109/1000 in British Columbia.

Home accident rates tended to be lower than the national average (33/1000) in the Atlantic Region (29/1000), Quebec (22/1000) and Ontario (24/1000) and higher than the national average in the Prairies (41/1000) and British Columbia (82/1000).

TEXT TABLE B:**Age-standardized accident rates per 1000 population by type of accident and region, Canada, 1987**

Region	Total accidents	Type of accident				
		Motor vehicle/traffic	Work-related	Sports-related	Home and surroundings	Unclassified
Canada	254	84	52	59	33	26
Atlantic	194	47	40	58	29	20
Quebec	171	60	48	31	22	11
Ontario	246	85	49	59	24	29
Prairies	306	108	55	69	41	33
British Columbia	440	130	77	109	82	43

General Social Survey, 1988

Seasonal, Location and Time Factors

For all accident types, the largest proportion occurred in the summer and with the exception of work accidents, the lowest proportion in the spring (Table 4). For work accidents, the lowest proportion occurred in the winter. Work and sports-related accidents were highly concentrated in the summer months. However, for home accidents, close to a quarter of all incidents occurred in both the winter and autumn, respectively. Accidents also differed in terms of the time of day in which they occurred. The majority (68%) occurred during the day (Table 5). This pattern was evident for all types of accidents, although the proportion of work accidents that occurred in the day was higher (77%) than among sports (64%), home (64%), motor vehicle (68%), and other accidents (61%). Daytime accidents were most likely to occur in the afternoon.

Many accidents, 46%, occurred on a street or outdoors (Table 6). As expected, nine out of ten motor vehicle accidents (92%) occurred in this location. Both work (66%) and sports accidents (60%) were most likely to occur in a commercial institution.

DISCUSSION

Variation in the prevalence of accidents by location, time of day, and season of the year reflects, in part, differences in exposure levels. A larger proportion of accidents occur at specific times because more people are involved in activities at that time. The summer months are important for accident prevalence because more people are outside or are engaged in activities that they might not ordinarily do. As well, the high proportion of work accidents that occur in the summer months, reflect the seasonal nature of employment in Canada.

It is apparent that there is considerable variation in the prevalence of accidents by region. The percentage of all accidents that were attributable to a certain accident type, in each region, is a reflection of regional differences in labour force status and various types of behaviours and environmental factors that impact on overall levels of exposure to risk. Differences in exposure to risk may reflect the way leisure time is spent, the quality of the community environment in the regions and diverse population densities.

A finding that warrants further investigation is the existence of a gradient in accident rates from east to west. Gradients from east to west have been identified for other types of behaviour in surveys. The 1985 General Social Survey showed that physical activity rates in-

creased from east to west.¹ This phenomenon was also noted in a study based on the 1981 Canada Fitness Survey.²⁻³ Levels of alcohol consumption, a factor which may be associated with accident rates, tend to be higher in British Columbia compared with other regions of Canada. These differences warrant further investigation to unravel the complex set of factors that make one region different from the next.

NOTES

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2.3 CHARACTERISTICS OF VICTIMS

HIGHLIGHTS

- People in upper income groups tended to have a higher prevalence of motor vehicle, sports and work-related accidents.
- Married people tend to have lower accident rates than single, divorced/separated or widowed people.

METHODS

In this section, some of the socio-demographic characteristics associated with accidents are examined, i.e. marital status, labour force participation, education and income. In numerous epidemiological studies, the concept of socio-economic status has been introduced to explain or predict patterns of morbidity, mortality or health behaviour. Although, the concept of socio-economic status is complex, it can be measured by education, income, occupation or by indexes based on all three of the preceding variables. Education is highly correlated with income and has been proven to be a useful measure of socio-economic status in previous epidemiol-

ogical research¹⁻³ and has implications for the types of interventions used by health promotion programs. For the purpose of this report, we rely on education and income as measures of socio-economic status.

Due to the constraints imposed by the sample size, it was not possible to show separate standardized rates for accident type, by sex. Consequently, the sex distribution of various accident types may have affected some of the rates.

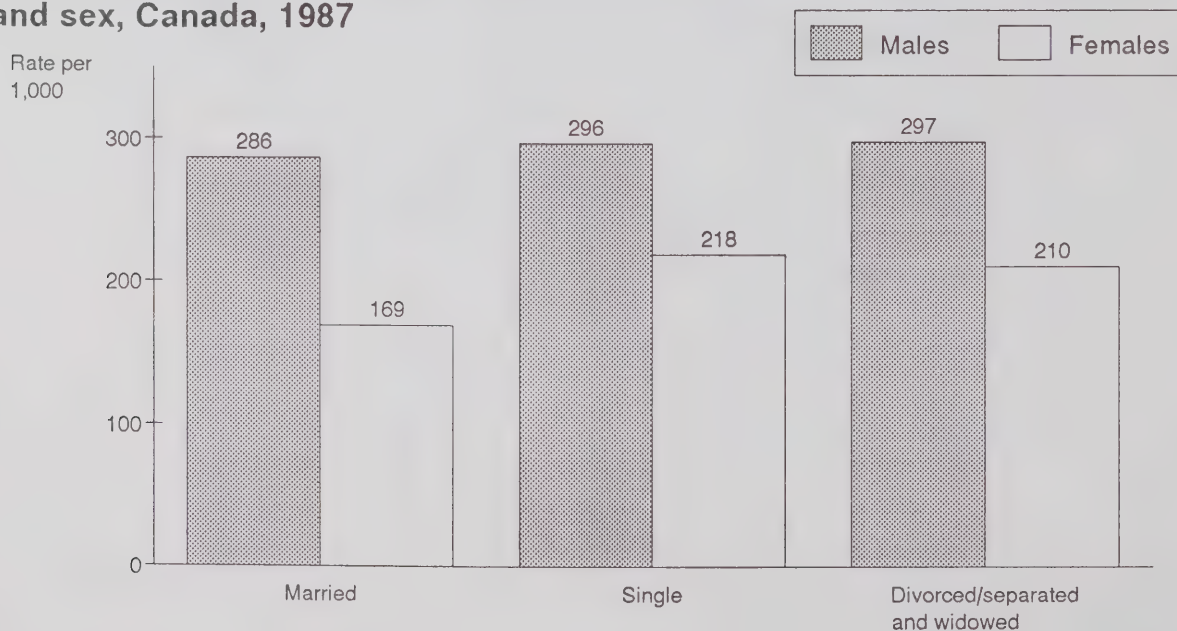
RESULTS

Socio-economic Factors

There is some evidence that the risk of personal injury is influenced by socio-economic factors, however, this association appears to be complex. For both men and women, married people tended to have the lowest accident rates (Figure G). People who were single or widowed tended to have higher accident rates. Among both men and women, accident rates for single people were similar to those of widowed people.

The association between marital status and accident prevalence varied by type of accident (Text Table C). Single people had the highest rates for motor vehicle

Figure G
Age-standardized accident rates per 1000 population by marital status and sex, Canada, 1987



TEXT TABLE C:**Age-standardized accident rates per 1000 population by type of accident and marital status, Canada, 1987**

Marital status	Total accidents	Type of accident				
		Motor vehicle/ traffic	Work-related	Sports-related	Home and surroundings	Unclassified
All types of marital status	254	84	52	59	33	26
Married	218	75	58	34	31	21
Single	260	89	46	66	28	30
Widowed/ Divorced/ Separated	240	58	—	—	36	—

General Social Survey, 1988

(89/1000) and sports accidents (66/1000). Married people had the highest rate for work accidents (58/1000). However, divorced/separated or widowed people had the highest rates for home accidents (36/1000).

Age-standardized motor vehicle accident rates are highest among working people (96/1000) and lowest among those who keep house (33/1000) (Text Table D). Conversely, rates for home accidents were highest among

people who keep house (43/1000) and lowest among people in the labour force (28/1000), students (21/1000), and the retired (12/1000). Students had the highest rates for sports accidents, 86/1000 and as expected, work accident rates were highest among working people (77/1000).

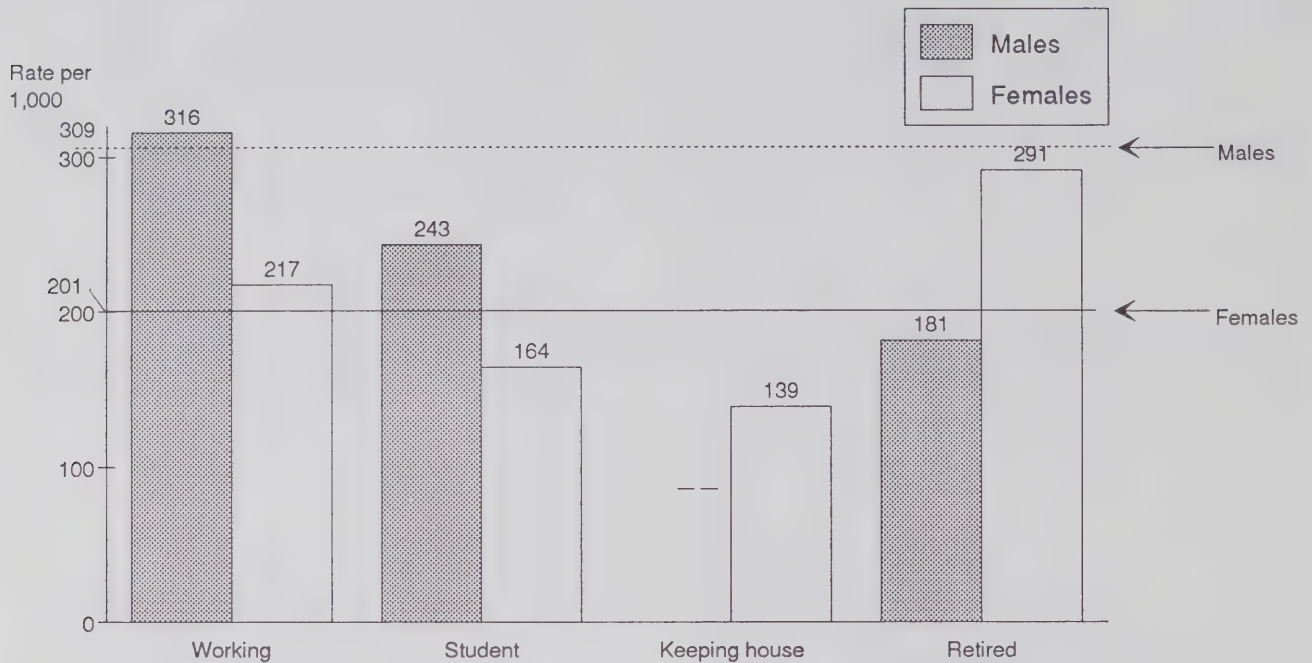
The prevalence of accidents was related to employment status. In all employment status categories except the retired, men had higher accident rates than women (Figure H). Working men had the highest rates, 316/

TEXT TABLE D:**Age-standardized accident rates per 1000 population by type of accident and employment status, Canada, 1987**

Employment status	Total accidents	Type of accident				
		Motor vehicle/ traffic	Work-related	Sports-related	Home and surroundings	Unclassified
All types	254	84	52	59	33	26
Working	272	96	77	50	28	21
Student	202	54	12	86	21	30
Keeping house	144	33	—	—	43	—
Retired	230	—	—	—	12	—
Other	—	—	—	—	—	—

General Social Survey, 1988

Figure H
Age-standardized accident rates per 1000 population by employment status and sex, Canada, 1987



General Social Survey, 1988

1000. Retired men had the lowest rates.

Women who were retired had the highest accident rates of all women, followed by those who were working, and students. Women who reported keeping house as their employment status had the lowest rates of all men and women.

For men, the risk of accident was highest for those with some secondary education or less, or a completed secondary education (Figure I). Men who had completed a postsecondary diploma or degree had the lowest rate. For women, the prevalence of accidents increased with each educational level up to some postsecondary education and declined in the highest education group.

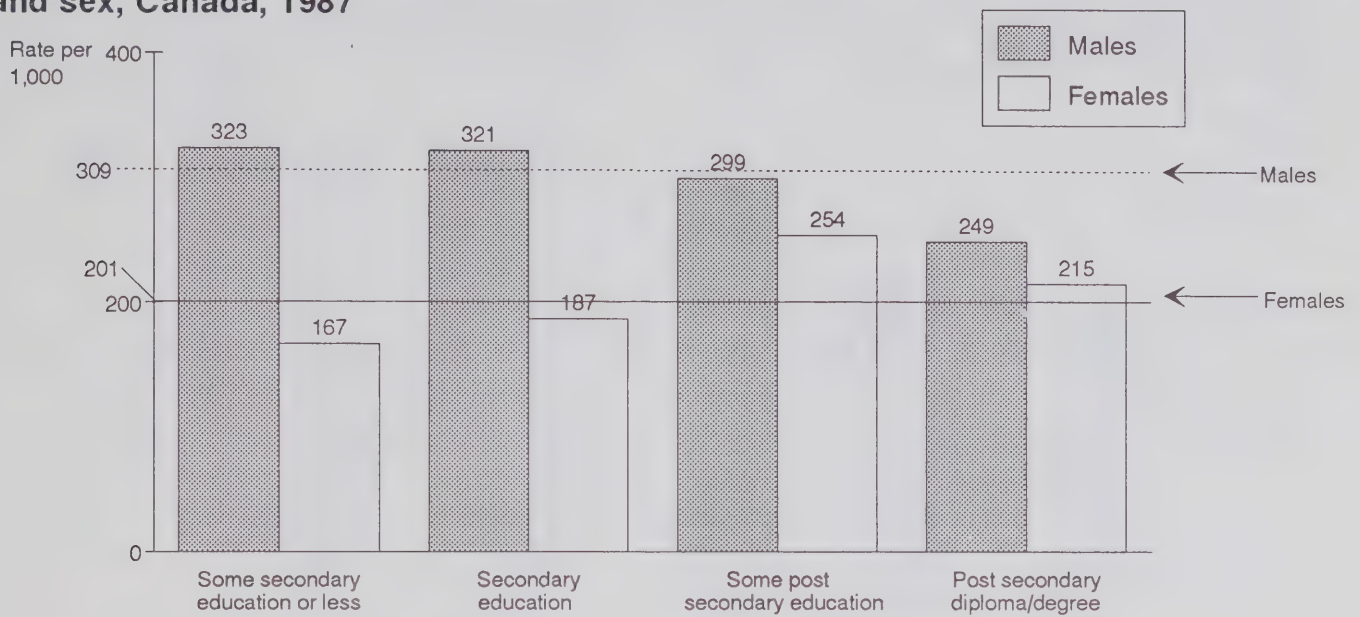
Age-standardized accident rates varied by level of education (Text Table E). People with some postsecondary education had the highest rate for motor vehicle accidents, 90/1000, compared with the lowest rate, 75/1000, for people with some secondary education or less. For home accidents, the rates were highest among people with some postsecondary education (44/1000) and lowest for people with a postsecondary degree/diploma (26/1000). The rate for sports accidents was highest for

people with postsecondary degree/diplomas (64/1000) and lowest for people who had completed secondary school (41/1000). However, people with a completed secondary school education had the highest work accident rate, 62/1000.

For both men and women, income level and accident prevalence appear to be related (Figure J). Generally, increases in income were associated with higher total accident rates. For men, each increment in income level up to the highest income category, was associated with an increase in the accident rate. In the highest income group (more than \$60,000), the accident rate for men was 357/1000. Men who earned less than \$15,000 in 1987 had a rate of 240/1000 compared with 381/1000 for men who earned \$40,000 to \$59,999. For women, differences were slight across all but the highest income category. Rates ranged from 206/1000 for women earning less than \$15,000 to 215/1000 for those earning \$40,000-\$59,999. However, women who earned in excess of \$60,000 had the highest rate of all women, 257/1000.

People with incomes in excess of \$60,000 had the highest age-standardized accident rates for both motor vehicle

Figure 1
Age-standardized accident rates per 1000 population by level of education and sex, Canada, 1987



General Social Survey, 1988

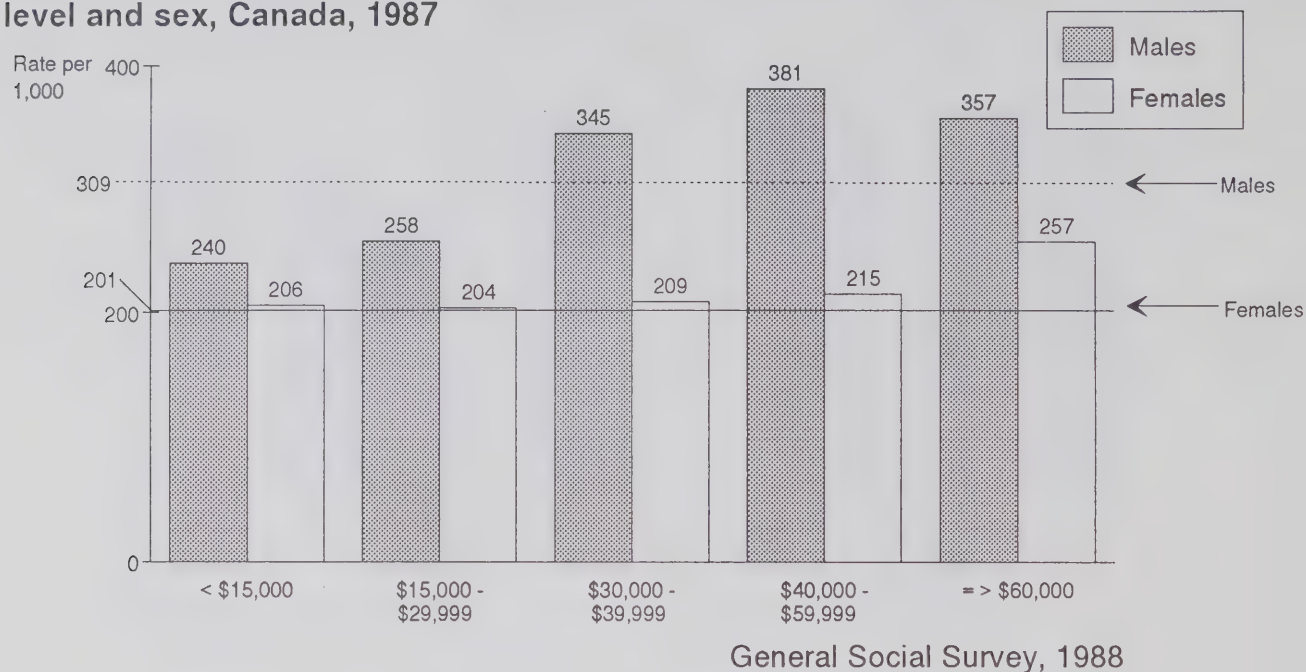
TEXT TABLE E:

Age-standardized accident rates per 1000 population by type of accident and level of education, Canada, 1987

Level of education	Total accidents	Motor vehicle/traffic	Type of accident			
			Work-related	Sports-related	Home and surroundings	Unclassified
All levels	254	84	52	59	33	26
Some secondary or less	246	75	51	61	31	27
Secondary graduation	251	86	62	41	32	30
Some post-secondary	275	90	58	58	44	25
Postsecondary diploma/degree	233	80	41	64	26	—

General Social Survey, 1988

Figure J
Age-standardized accident rates per 1000 population by household income level and sex, Canada, 1987



TEXT TABLE F:

Age-standardized accident rates per 1000 population by type of accident and household income level, Canada, 1987

Household income level	Total accidents	Type of accident				
		Motor vehicle/traffic	Work-related	Sports-related	Home and surroundings	Unclassified
All income levels	254	84	52	59	33	26
Less than \$15,000	217	71	47	33	44	-
\$15,000 - \$29,999	226	70	55	39	30	33
\$30,000 - \$39,999	279	89	63	60	45	-
\$40,000 - \$59,999	305	96	70	80	40	-
\$60,000 and over	316	114	51	90	31	-

General Social Survey, 1988

(114/1000) and sports accidents (90/1000) (Text Table F). For work accidents, people with incomes of \$40,000 to \$59,999 had the highest rate, 70/1000 compared with the lowest rate, 47/1000, for people with incomes less than \$15,000. Home accidents were most prevalent among people with incomes of \$30,000 to \$39,999 at 45/1000 compared with a rate of 30/1000 among people with incomes of \$15,000 to \$29,999.

DISCUSSION

The association between socio-economic status and accident risk raises a number of questions. In most studies of mortality, socio-economic status is an important factor in predicting mortality patterns. Lower socio-economic groups tend to have higher accidental mortality rates.⁴⁻⁵ However, in the GSS, accident rates tend to be higher in upper income groups. We believe that the socio-economic patterns of accident rates, in this report, reflect differences in the exposure of groups to the risk of an accident. In order to be exposed to the risk of a work-related accident, an individual has to be employed. A person with a low income is more likely to be an individual with a tenuous attachment to the labour force. Similarly, in order to be at higher risk for a motor vehicle accident one has to have access to motor vehicle transportation and the money to pay for the cost of the miles driven over the course of a year. Possibly, the income and educational differences observed in this study represent differences in exposure to risk.

Support for the argument that upper socio-economic groups were more likely to be exposed to a sports injury due to greater participation levels in sports activities is found in the 1981 Canada Fitness Survey. People with higher levels of education were more likely to report physical activity in their leisure time.⁶ In a recent follow-up of the Canada Fitness Survey, sports injury rates were highest among people who were more physically active than others.⁷

This study deals primarily with the social characteristics of accident victims by necessity, as the survey did not ask questions about the environmental context in which accidents occurred. Consequently, consideration of risk factors have focused on social characteristics such as education and income level. Current theoretical perspectives on the etiology of accidents emphasize the importance of taking into account the complex nexus of the individual and the environment when analyzing accident statistics.⁸⁻⁹

NOTES

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2.4 ALCOHOL USE AND REPORTED ACCIDENTS

HIGHLIGHTS

- The prevalence of accidents in the three-year period prior to the survey was higher among current drinkers than other people. Forty-two percent of current drinkers reported having one or more accidents compared with 34% of occasional drinkers and 27% of non-drinkers.
- Accident prevalence was directly associated with the amount of alcohol normally consumed per week. Men who reported that they drank over 7 drinks per week had an accident rate 1.6 times higher than non-drinkers. For women, the rate was 1.2 times higher.
- Accident rates were higher among current drinkers than among non-drinkers for all types except home accidents.

METHODS

Respondents were asked about the frequency and volume of alcohol consumed per week from which categories of consumption were determined. The definition of a regular or "current" drinker was inclusive of respondents who reported drinking an alcoholic beverage at least once a month. Current drinkers were further classified according to the volume of alcohol consumed in a typical week. Weekly volume was reported in categories of 0 drinks, 1-6 drinks, 7-13 drinks, 14 or more drinks and not stated. A drink was defined as one bottle of beer, one small glass of wine, or 1 1/2 oz of liquor. This classification of drinking behaviour is consistent with that used in previous General Social Surveys and other Canadian health surveys.

In addition to the respondents' accident experience in 1987, this section presents data on the respondents' exposure to accidents in the three-year period, January 1985 to January 1988 (Question C11), to examine the relationship between accident behaviour and alcohol consumption.¹ The four separate parts of the question were combined to form a variable totalling the number of incidents which occurred during this period, regardless of type. Previous research has indicated that with long recall periods, respondents underestimate accident rates, nevertheless, the association between reported alcohol consumption and accidents appears robust.

RESULTS

Alcohol Consumption

There were wide variations in the frequency and weekly volume of alcohol consumption by sex and age. Overall, 70% of men were classified as current drinkers compared with 48% of women (Table 7). This difference was concentrated mainly in the heavier volume categories of alcohol consumption (7 drinks or more per week). Men were almost four times as likely as women (15% versus 4%) to report drinking 7 or more drinks per week.

Age comparisons revealed that people age 25-44 were more likely to report that they were current drinkers (66%) than other respondents (Table 8). Young drinkers age 15-24 reported the second highest prevalence (60%) of current drinking followed by people age 45-64 (56%). The 65 and over age group reported the lowest prevalence of current drinking. There was little difference by age in the proportion who reported drinking 7 drinks or more in a typical week. About 10% of all respondents under age 65 drank 7 or more drinks per week. In the 65 and over age group, 6% of respondents drank 7 or more drinks.

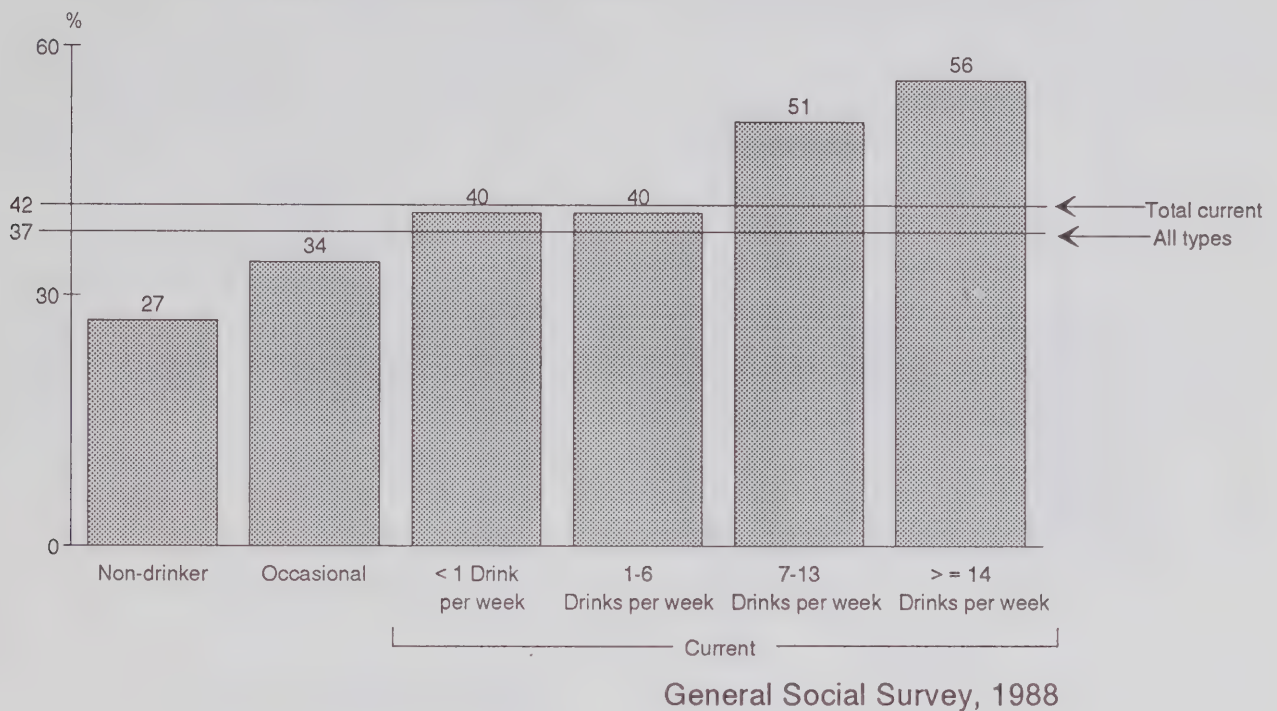
Three-Year Accident Experience

Respondents who indicated that they were current drinkers were more likely to have experienced an accident in the three years preceding the survey, than those who did not drink (Table 7). About 42% of current drinkers reported having one or more accidents during this period, compared with 34% of occasional drinkers and 27% of non-drinkers.

The dose-response effect was apparent for the association between alcohol and accidents. This effect is a direct relationship between the level of exposure to a particular factor and the corresponding level of occurrence of a disease/incident. In the case of accidents, as the level of alcohol consumption increased, the proportion of respondents who indicated that they had been in an accident during the three-year period also increased (Figure K). For people who drank 1-6 drinks per week, 40% had an accident, compared with 51% of those who drank 7-13 drinks and 56% of those who drank 14 or more per week. The dose-response effect was also apparent among those respondents who were involved in four or more accidents. Only 3% of non-drinkers had had four or more accidents in the 3 years compared with 4% of occasional drinkers and 6% of current drinkers (Table 7). Among current drinkers, the probability of being in four or more accidents was three times greater among those who drank 14 or more drinks per week than those who drank less than 7 drinks per week.

Figure K

Proportion of population involved in an accident between January 1985 and January 1988, by type of drinker, Canada



One-Year Accident Experience

When the accidents reported in 1987 are expressed in terms of a rate per 1000 population, the results show that for both men and women, the risk of accident increased with the amount of alcohol consumed. The tendency was much more pronounced for women than men (Figure L).

The association between alcohol consumption and prevalence of accidents was also apparent when accidents were compared by type. For all accident types, except the home, accident rates were higher among current drinkers than among non-drinkers (Text Table G). People who consumed more than 7 drinks per week had higher accident rates than individuals who consumed less than seven.

DISCUSSION

The role of alcohol in motor vehicle accidents has been well documented.²⁻⁴ A recent survey of drinking and driving indicates that about 17% of Canadians acknowledged that in the past year they had driven an automobile after having two or more drinks within one hour. If the

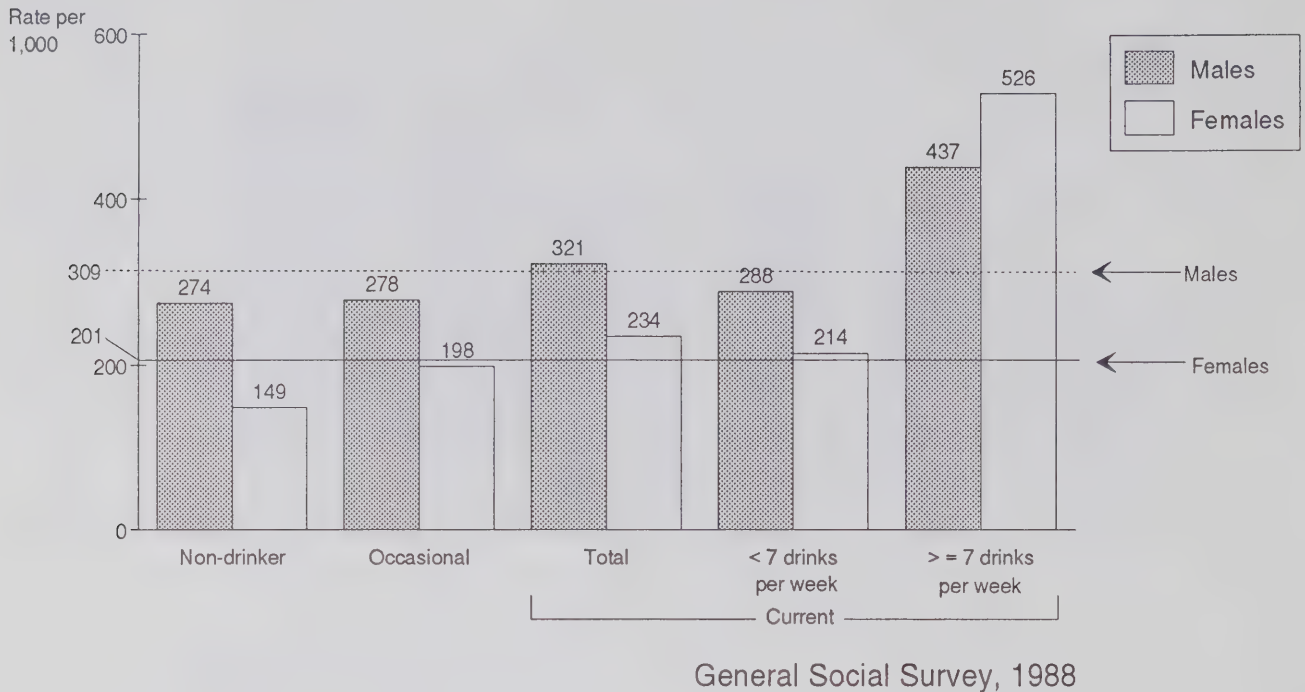
estimate was restricted to those adults who were drinkers and who drove a car, the percentage increased to one out of four Canadians. People who were most likely to drive after drinking tended to be men, younger adults, single people, and people with a high income level.⁵

In the 1985 Health Promotion Survey, the percentage of respondents who reported that they had driven after drinking at least once in the month preceding the survey, increased with income. People reporting the highest income level were twice as likely to have driven after drinking than people at the lowest level.⁶ Young people are also more likely to drive after drinking.

Since the effect of alcohol on coordination, perception and motor task skills has been established for motor vehicle accidents, it would be reasonable to assume that alcohol would be an important factor in those injuries that occur in the home, work and recreational environments. However, there is little research on the role of alcohol in the preceding settings.⁷ A study on the role of alcohol in work injuries suggests that alcoholics are twice as likely to have a work-related injury as non-alcoholics.⁸ In contrast, a survey of accident prevalence in New England reported that drinking at work was not significantly or independently associated with work accidents.

Figure L

Age-standardized accident rates per 1000 population by type of drinker and sex, Canada, 1987



TEXT TABLE G:

Age-standardized accident rates per 1000 population by type of accident and type of drinker, Canada, 1987

Type of drinker	Type of accident					
	Total accidents	Motor vehicle/traffic	Work-related	Sports-related	Home and surroundings	Unclassified
Non-drinker	197	63	30	46	43	--
Occasional drinker	224	71	46	54	28	26
Current drinker	282	96	60	64	33	29
Less than 7 drinks per week	251	86	52	54	33	27
7 drinks or more per week	443	150	103	117	--	--

General Social Survey, 1988

Compared with abstainers, people who, on average, consumed five or more drinks each day experienced relative risks that were 1.7 times higher for work accidents, 3.8 times greater for injuries requiring hospitalization, and 2.0 times greater for job-based accidental injuries.⁹ The association between alcohol consumption and various accident types in this report suggests a need for a more systematic appraisal of the role of alcohol in all types of accidents.

The role of alcohol, in the severity of injury, has been a topic of considerable interest in recent years. Some studies suggest that alcohol is more likely to exacerbate the effects of injury¹⁰ while others contend that intoxicated persons are less likely to suffer serious injury.¹¹ It is possible for patients to be misdiagnosed when they reach the hospital, if they are impaired and cannot speak for themselves. As well, they may be at risk of a harmful interaction between alcohol and anaesthesia should the medical staff be unaware of their blood alcohol level.

Gender differences in accident rates, by levels of alcohol consumption, are striking, however, there are a number of methodological factors that may account for the association. The gender differences may be an artifact of differences between men and women in the willingness to accurately report alcohol consumption and prevalence of accidents. If the level of reporting for alcohol consumption or accidents does not differ by sex, the greater tendency of women to experience more accidents at higher levels of alcohol consumption may reflect the fact that women have a lower body mass index than men and may be more affected by the same amount of alcohol. However, if this explanation was plausible one would expect that women would also have higher accident rates at moderate levels of alcohol consumption and this does not appear to be the case. Consequently, the observed difference between men and women in accidents requires a more detailed examination.

NOTES

1. Note: Disaggregation by level of alcohol consumption for the 3-year study utilized weekly consumption frequencies identified by respondents for 1987.
2. A.C. Wagennar, *Alcohol, Young Drivers and Traffic Accidents*. Lexington Books, Lexington, Massachusetts 1983.
3. R.F. Borkenstein, R.F. Crowther, R.P. Shumate, W.B. Ziel, R. Zylman, "The Role of the Drinking Driver in Traffic Accidents", *Alcohol Drugs Behaviour*, 1974; The Grand Rapids Study; 2(suppl):8-32.
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5. Health and Welfare Canada, *National Survey on Drinking and Driving, 1988*, Overview Report, Catalogue H-39-163/1989E, Ottawa, 1989.
6. R. Warren, "Safety on the road". In *Canada's Health Promotion Survey: Technical Report*, Eds., Irving Rootman, Reginald Warren, Thomas Stephens, and Larry Peters. Health and Welfare Canada, Ottawa, 1988.
7. G.S. Smith, J. Kraus, "Alcohol and Residential, Recreational, and Occupational Injuries: A Review of the Epidemiological Evidence". *Annual Review of Public Health*, 1988; 9:99-121.
8. M. Shain, "Alcohol, Drugs and Safety: An Updated Perspective on Problems and Their Management in the Workplace". *Accident Analysis and Prevention*, 1982; 14(3):239-246.
9. R.W. Hingson, R.I. Lederman, D.C. Walsh, "Employee Drinking Patterns and Accidental Injury: A Study of Four New England States". *Journal of Studies on Alcohol*, 1985; 46(4):298-303.
10. J. Waller, R.J. Stewart, A.R. Hansen et al. The Potentiating Effects of Alcohol on Driver Injury. *JAMA*, 1986; 256:1461-1466.
11. J. Huth, R. Maier, D. Simonowitz, C. Herman, "Effect of Acute Ethanolism on the Hospital Course and Outcome of Injured Automobile Drivers". *Journal of Trauma*, 1983; 23:494-498.

CHAPTER 3

CONSEQUENCES OF ACCIDENTS

3.1 GENERAL OVERVIEW OF CONSEQUENCES

HIGHLIGHTS

- Out-patient medical treatment was required in 37% of all accidents.
- In-patient hospital stays were involved in 8% of all accidents.

METHODS

Information about the consequences of accidents was obtained from the detailed accident report completed by respondents who indicated they had experienced an accident. The content of the questions focused on whether the respondent received medical attention (F20) or experienced activity limitation/disability as a result of the accident. Additional information was collected on financial loss and extra expenses (F30 and F32), and the

recovery, if any, of expenses from an insurance policy or Worker's Compensation (F31).

As a prelude to questions related to activity limitation and disability, respondents were asked about their main activity in the week of the accident. Activity-loss days (F29) have been defined to include bed-disability (F22) and hospital days (F20). Similarly, bed-disability days include hospital days.

RESULTS

Physical Consequences

Most accidents (79%) resulted in injuries, 79% in activity-loss days, 45% in hospital care and 39% in financial loss (Table 9). Of all accidents, 37% resulted in out-patient medical treatment and 8% involved an in-patient hospital stay. In 17% of accidents, compensation was paid to the victim.

Motor vehicle accidents were proportionately less likely

TEXT TABLE H :

Number of accidents by whether the accident resulted in injury, by sex and type of accident, Canada, 1987

Sex and type of accident	Total accidents		Number with injuries		No injury		Not stated	
	No.	%	No.	%	No.	%	No.	%
	No. in thousands							
Both sexes								
All incidents	5,127	100	4,044	79	1,032	20	--	--
Motor vehicle/traffic	1,697	100	707	42	988	58	--	--
Work related	1,052	100	1,034	98	--	--	--	--
Sports related	1,188	100	1,181	99	--	--	--	--
Home and surroundings	670	100	662	99	--	--	--	--
Unclassified	520	100	461	89	--	--	--	--
Males								
All incidents	3,062	100	2,402	78	642	21	--	--
Motor vehicle/traffic	1,057	100	448	42	609	58	--	--
Work related	760	100	742	98	--	--	--	--
Sports related	773	100	766	99	--	--	--	--
Home and surroundings	243	100	240	99	--	--	--	--
Unclassified	230	100	206	90	--	--	--	--
Females								
All incidents	2,064	100	1,642	80	390	19	--	--
Motor vehicle/traffic	641	100	259	40	379	59	--	--
Work related	292	100	292	100	--	--	--	--
Sports related	415	100	415	100	--	--	--	--
Home and surroundings	428	100	421	99	--	--	--	--
Unclassified	290	100	255	88	--	--	--	--

to result in personal injury than other types of accidents (Text Table H). This anomalous finding is related to the GSS definition of an accident which includes accidents not involving personal injury. However, if motor vehicle accidents that did not result in personal injury are excluded from the calculations, 16% of motor vehicle accidents resulted in an in-patient stay at a hospital. This percentage was higher than in any other accident category.

Accidents among seniors (age 65 and over) were more likely to result in personal injury than incidents among younger people (Text Table I). Accident incidents involving men were more likely to result in medical care from a hospital than those involving women (Table 9). However, incidents involving women were more likely to involve medical attention from another setting, such as a doctor's office. Incidents involving women were also more likely than those involving men to result in bed-

days and activity-loss days.

DISCUSSION

The consequences of an accident within any age/sex group are closely related to factors such as the type of accident, severity of injuries, employment status, and level of insurance and disability coverage. Therefore, caution is advised in the interpretation of the age/sex patterns of the consequences of accidents.

TEXT TABLE I :

Number of accidents by whether the accident resulted in injury, by sex and age group, Canada, 1987

Sex and age group	Total accidents		Number with injuries		No injury		Not stated	
	No.	%	No.	%	No.	%	No.	%
	No. in thousands							
Both sexes								
All age groups	5,127	100	4,044	79	1,032	20	--	--
15-24	2,170	100	1,728	80	410	19	--	--
25-44	2,150	100	1,681	78	454	21	--	--
45-64	603	100	459	76	141	23	--	--
65+	204	100	176	86	--	--	--	--
Males								
All age groups	3,062	100	2,402	78	642	21	--	--
15-24	1,364	100	1,083	79	275	20	--	--
25-44	1,330	100	1,042	78	278	21	--	--
45-64	307	100	221	72	84	27	--	--
65+	--	--	--	--	--	--	--	--
Females								
All age groups	2,064	100	1,642	80	390	19	--	--
15-24	806	100	645	80	135	17	--	--
25-44	820	100	639	78	177	22	--	--
45-64	295	100	238	81	--	--	--	--
65+	143	100	120	84	--	--	--	--

3.2 INJURIES FROM ACCIDENTS

HIGHLIGHTS

- Multiple injuries occurred in 10% of all accidents involving injury. Close to 44% of multiple injury accidents were the result of motor vehicle accidents.
- Of all injuries, 11% involved broken bones.
- Sports injuries were responsible for 36% of all fractures.
- Over half of all incidents with injury (2.2 million) involved the extremities (arms/hands, legs/feet).
- Just over one-half million back or spine injuries were reported, representing 12% of all injuries.

METHODS

Respondents were asked to recall the nature of the accident in terms of the type, time and circumstances of the incident, as well as the nature and type of injuries sustained. There are a number of potential limitations in the data:

1. Since the questions about the nature of injury and

region of body injured were self-reported and no independent assessment was done, they can be expected to have less validity than those based on formal medical assessment.

2. Accidents that occurred a year ago are less likely to be recalled accurately than more recent accidents.
3. For some types of injury, the severity and type of injury may influence recall of the injury event.

It is difficult to judge the severity of specific types of injury: a cut could be superficial or a more serious injury. To some extent, the consequences of an injury, in terms of the level of treatment, can be used as an approximate measure of severity.

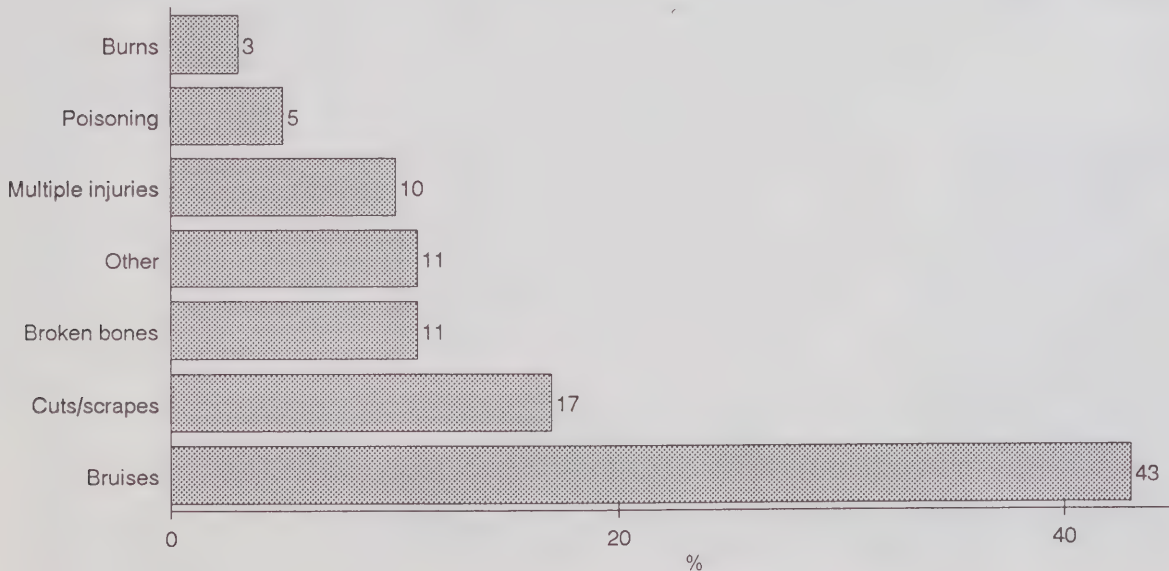
In the results that follow, any accident that resulted in more than one type of injury has been classified as "multiple injuries".

RESULTS

Type of Injury

The most prevalent injuries were bruises (43%) and cuts/scrapes (17%) followed by broken or fractured bones (11%). Multiple injuries

Figure M
Proportion of accident incidents involving injury by type of injury, Canada, 1987



were reported for 10% of all accidents. Poisonings (5%) and burns (3%) were the next most frequently reported categories. The remainder, 10%, were other types of injuries.

Injuries tended to be concentrated among young people (Table 10). For example, 39% of all fractures, 54% of all poisonings, and 43% of all multiple injuries involved people age 15-24.

Distribution of Injuries by Type of Accident

For each accident type, the most common injuries were sprains/strains/dislocations/ or bruises (Table 11). However, the distribution of injuries within accident categories was influenced by the severity of the accident. In one out of four motor vehicle accidents, multiple injuries were sustained. Fourteen percent of sports accidents resulted in broken bones compared with 10% of work accidents.

Of all injuries, 29% were sustained during a sports accident, 26% at work, 17% in a motor vehicle accident and 16% at home. The remainder were unclassified (11%) (Table 11). Among the injury-related accidents, specific types of injury were associated with certain types of accidents. For example, 36% of all fracture injuries were associated with a sport or recreational activity.

Region of Body Injured

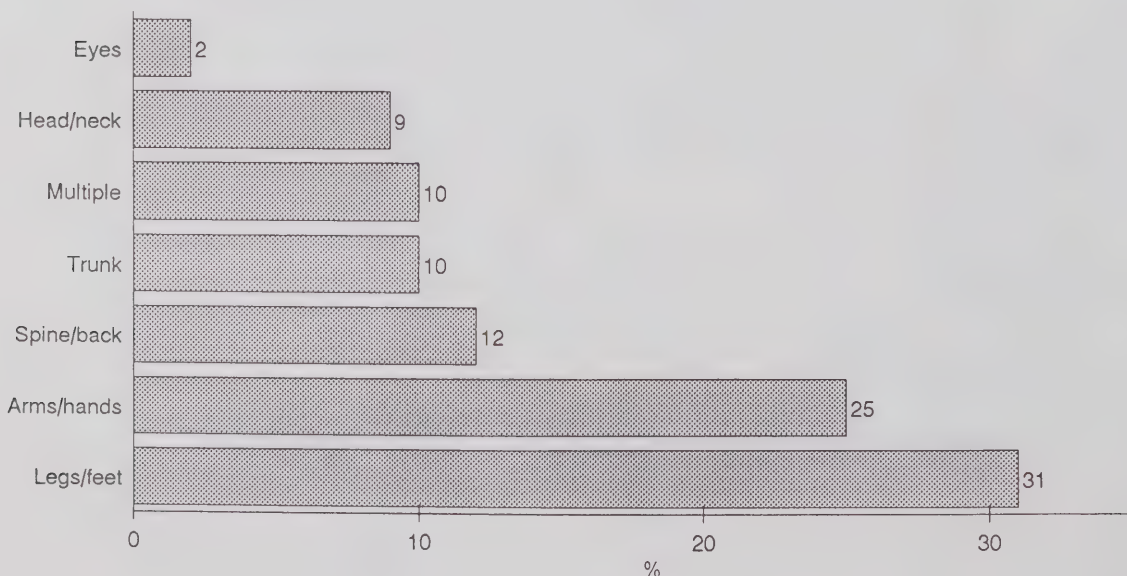
Most injuries (56%) involved only the extremities of the body (Table 12, Figure N). Over 2.2 million incidents involved injuries to the arms\hands and legs\feet, uniquely. Injuries to the spine or back totalled about a half million.

As expected, the proportional distribution of injuries by region of the body injured was related to the accident type in which it occurred. Motor vehicle accidents were responsible for 37% of all reported head injuries and 54% of injuries that involved multiple regions of the body (Table 12). Sports accidents were responsible for 48% of all injuries to the legs or feet and work accidents were involved in 39% of all injuries to the back or spine.

DISCUSSION

The type of injuries suffered and the region of the body affected were dependent upon factors such as age, sex, and type of accident. The estimates by age group highlight the concentration of injuries in the younger age groups. This was expected as accident rates among youth are generally higher. The high concentration of certain types of injuries, such as fractures, among youth has both positive and negative consequences. On the one hand, youth generally have better recuperative powers than older people, on the other, serious injuries may have sequelae that last for many years.

Figure N
Proportion of accident incidents involving injury by region of body injured, Canada, 1987



3.3 DISABILITY DAYS

HIGHLIGHTS

- In 1987, approximately 51 million activity-loss days, nine million bed-disability days and two million hospital days were attributable to accidents.
- People age 15-24 experienced the highest disability-day rates from accidents.
- In 1987, the estimate of hospital costs associated with accidents was 648 million dollars.
- Motor vehicle accidents represented the largest percentage of hospital expenditures for accidents.

METHODS

Activity limitation was measured by asking respondents about their main activity during the week of the accident and if they had any difficulties carrying out this activity as a result of the accident (F29). Respondents were also asked about any medical attention they received at a hospital as a result of the accident. Those who were admitted to hospital were asked for the number of nights they

stayed in hospital (F20) and those not admitted were asked if they received treatment from a doctor or nurse. Bed disability was measured by asking respondents if, as a result of the accident, they had to stay in bed for all or most of the day (F22).

RESULTS

Activity-loss and Bed-disability Day Rates

Of the total population, activity-loss day rates and bed-disability day rates decreased with age (Text Table J). Peak rates for both types of disability occurred in the 15-24 age group. People in the 15-24 age group had the highest hospital disability rates, at a level more than twice as great for the population as a whole.

Among men, the rates for all disability types were highest in the 15-24 age group. Among women, there was little difference in the rate of activity-loss days between all age groups except the 45-64 age group where the lowest rate was observed. The differences in the rate of activity-loss days between the older and younger age groups are not as great for women as they are for men.

TEXT TABLE J :

Number of activity-loss days and rate per 1000 population by type of activity-loss, sex and age group, Canada, 1987

Sex and age group	Activity-loss days		Bed-disability days		Hospital days	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
	No. in thousands					
Both sexes						
All age groups	51,012	2,526	9,350	463	2,078	103
15-24	14,384	3,529	2,899	711	932	229
25-44	22,202	2,611	3,803	447	462	54
45-64	10,612	2,138	1,819	366	--	--
65+	3,814	1,439	--	--	--	--
Males						
All age groups	28,850	2,913	4,999	505	1,190	120
15-24	9,722	4,672	1,378	662	611	293
25-44	12,323	2,905	2,353	555	337	79
45-64	6,180	2,527	--	--	--	--
65+	--	--	--	--	--	--
Females						
All age groups	22,161	2,154	4,351	423	889	86
15-24	4,663	2,337	1,521	762	--	--
25-44	9,879	2,318	1,450	340	--	--
45-64	4,431	1,760	689	273	--	--
65+	3,188	2,106	--	--	--	--

¹ For a small number of incidents, the number of days is not known, however, the total population has been included in the calculation of rates.

Hospital Costs

The estimated cost of hospital days for accidents in 1987 was 648 million dollars (Text Table K). Motor vehicle accidents were the largest single category of hospital expenditures (37%) for accidents and were almost twice the expenditure for work-related accidents (19%).

would be greater than those reported in the earlier hospital statistics and that the overall utilization patterns, by sex and age, would be similar. However, the hospital cases attributable to accidents and the utilization patterns in the General Social Survey appear to be inconsistent with the data from the hospital morbidity statistics.

TEXT TABLE K:

Estimated hospital costs attributed to accidents by type of accident, Canada, 1987

Type of accident	Number of nights	Estimated cost ¹	
	(No. in thousands)		
All incidents	2,078	648,336	100%
Motor vehicle/traffic-related	762	237,744	37
Work-related	393	122,616	19
Sports-related	--	--	--
Home and surroundings	--	--	--
Unclassified	--	--	--

¹ Estimates of the cost of an acute bed were provided by the Canadian Centre for Health Information of Statistics Canada. In 1987, this cost was \$313.00 per day.

General Social Survey, 1988

DISCUSSION

Independent evidence related to hospital days due to accidents is available from hospital morbidity statistics for the period 1985-86.¹ Hospital statistics conventionally show hospital separations by nature of diagnosis. However, hospital statistics for the 1985-86 period also reported the external cause of the admission diagnosis. A total of 237,940 accident cases resulted in 4,503,546 hospital days and each case involved an average hospital stay of 18.9 days (Text Table L).

If the patterns of hospital-day utilization are compared by sex and age, the impact of accidents on hospital days is even more striking. In the population age 15 and over, older women accounted for 57% of all hospital days that were due to accidents. For men, 44% of hospital days attributable to accidents were utilized by the 65 and over age group. Among women, the 65 and over age group utilized 76% of these days.

It was anticipated that, given the trend in accidents and population growth between 1985 and 1987, the number of separations estimated in the General Social Survey

The number of hospital days in the General Social Survey are considerably less than those reported in hospital morbidity statistics.

One factor that may account for the low estimate in the GSS is the possibility that individuals who were more likely to have been hospitalized for a brief or extended period of time would have been unavailable to answer the survey. Those older individuals who experienced an accident in a long term care facility and then were admitted to a hospital would not be captured in the General Social Survey sample.

Recall of the number of days in a hospital may be underestimated and may also be a contributing factor in the low estimate. As well, the accuracy of the data may be affected by the tendency of respondents to forget events with the passage of time. Injuries that involved emotional upset may be less likely to be recalled. An additional factor that could influence recall is the type of injury that the individual sustained. People who suffered a head

TEXT TABLE L:

Number of separations, number of hospital days and average number of hospital days for accidents, by sex and age group, Canada, 1985

Sex and age group	Separations	Hospital Days	Average Days
Both sexes			
All age groups	237,940	4,503,546	18.9
15-24	49,314	387,549	7.9
25-44	66,539	596,887	9.0
45-64	49,253	729,314	14.8
65 and over	72,834	2,789,802	38.3
Males			
All age groups	136,671	1,933,903	14.2
15-24	36,091	283,495	7.9
25-44	46,740	403,723	8.6
45-64	28,723	398,764	13.9
65 and over	25,117	847,921	33.8
Females			
All age groups	101,269	2,569,643	25.4
15-24	13,223	104,054	7.9
25-44	19,799	193,158	9.8
45-64	20,530	330,550	16.1
65 and over	47,717	1,941,881	40.7

Note: Each time a person is admitted to hospital an admission/separation form is filled out. Each record represents one continuous stay in hospital by one person and at the end of the stay separated from the hospital as a live discharge, transfer or death.

Source: Adapted from Table 2, In: R. Riley, P. Paddon, "Accidents in Canada, Mortality and Hospitalization", *Health Reports, Vol. 1, No. 1*. Statistics Canada, Canadian Centre for Health Information, Catalogue 82-003, Ottawa, 1989, pp.23-50.

General Social Survey, 1988

injury may be less likely to recall hospitalization information, particularly if the injury left residual damage to the brain.

Estimates of the cost of hospital days attributable to accidents, should be regarded as conservative estimates of hospital costs because of possible under-reporting. However, the relative importance of accident types is probably valid. It would appear that accidents represent a substantial cost to the health care system, and that the largest single category of expenditures for accidents is motor vehicle accidents. Consequently, any attempt to

reduce the burden of accidents on the health care system should focus on reduction of accidents in general, and motor vehicle accidents in particular.

NOTE

1. R. Riley, P. Paddon, "Accidents in Canada, Mortality and Hospitalization", *Health Reports, Vol. 1, No. 1*, Statistics Canada, Canadian Centre for Health Information, Catalogue 82-003, Ottawa, 1989, pp.23-50.

3.4 OUT-OF-POCKET EXPENSES

HIGHLIGHTS

- In 1987, Canadians paid approximately 1.1 billion dollars in personal out-of-pocket expenses for accidents.
- Motor vehicle accidents accounted for 58% (647 million dollars) of all out-of-pocket expenses.
- Work-related accidents resulted in 294 million dollars in out-of-pocket expenses. This sum represented 26% of total out-of-pocket expenses attributable to accidents.

METHODS

Personal expenses associated with an accident were measured by asking respondents about any financial

losses or extra expenses incurred as a result of the accident (F30). They were also asked if they had recovered any of these costs (F31) and their best estimate of out-of-pocket expenses (F32). Out-of-pocket expenses entail such expenditures as the deductible on auto insurance claims, non-insured dental care, extra transportation expenses or prescription drug costs.

RESULTS

Economic Consequences

About 1.6 million accidents involved out-of-pocket expenses, resulting in the expenditure of over 1.1 billion dollars (Text Table M). Motor vehicle accidents accounted for 58% of all expenses (647 million dollars) and work accidents 26% (\$294 million). Home accidents cost victims \$83 million. While the average cost per victim was about \$704.00, the average out-of-pocket expense varied by type of accident. Work accidents were the most costly at an average cost of \$1112.00 per incident, followed by motor vehicle (\$717.00) and home (\$680.00).

TEXT TABLE M :

Out-of-pocket expenses associated with accidents, by type of accident, Canada, 1987

Type of accident	Number of accidents with expenses		Out-of-pocket expenses ¹		Average cost
	(No. in thousands)	%	(millions \$)	%	(\$)
All incidents	1,597	100	1,125	100	704
Motor vehicle/traffic	902	56	647	58	717
Work related	264	17	294	26	1,112
Sports related	197	12	66	6	335
Home and surroundings	123	8	83	7	680
Unclassified	111	7	35	3	315

¹ This amount under-estimates actual costs, as dollar values were not provided for 9% of incidents where financial loss/extra expenses were incurred. This group has been omitted from the calculations.

Although young people age 15-24 experienced more accidents than older people, their average personal expenses per incident were the lowest (\$540.00) of all age groups (Text Table N). In contrast, for incidents where the victim was age 25 or older, average expenses amounted to \$798.00.

The pattern of average cost also differed by gender. The average cost of an accident among men was \$726.00 compared with \$669.00 for women. For men, the average cost increased with age, rising to \$960 for those aged 45 and over. For women, average costs of an accident were lowest in the 15-24 age group (\$477) and highest among women age 25-44 (\$833.00).

DISCUSSION

Out-of-pocket expenses associated with accidents may be affected by the degree to which a respondent has insurance coverage: not all workers are covered by Worker's Compensation or private disability insurance. Consequently, people in lower socio-economic groups, who are least able to afford comprehensive insurance coverage, could be expected to pay more out-of-pocket expenses for accidents.

It is important to reiterate that these expenses represent only those expenses paid for by the individual, from his own pocket. The cost of accidents is bound to be many times higher when litigation, insurance costs, Workers' Compensation, hospitalization and medical costs, and the lost productivity of workers are factored into total costs. The economic impact of accidents in the United States is enormous. A recent report in the United States assessed the economic impact of injury by calculating the lifetime cost of injury.¹ The economic model used in the document took into account the amount spent for hospital and medical care services for people injured in 1985 and the value lost to society due to premature death or inability to work/keep house. The lifetime cost model took into account the cost incurred in the first year of the injury and the cost incurred in successive years. In 1985, the lifetime estimate of injuries was 158 billion dollars. This estimate worked out to \$2,772 dollars for each person who was injured. The greatest economic losses were attributable to motor vehicle accidents and falls. Motor vehicle accidents accounted for 31% of costs and falls 24%.

NOTE

1. D.P. Rice, E.J. MacKenzie and Associates. "Cost of Injury in the United States". A report to Congress, 1989. Institute for Health and Aging, University of California and Injury Prevention Center, The John Hopkins University, San Francisco, California 1989.

TEXT TABLE N :
Out-of-pocket expenses associated with accidents by sex and age group, Canada, 1987

Sex and age group	Number of accidents with expenses		Out-of-pocket expenses ¹		Average cost
	(No. in thousands)	%	(millions \$)	%	
Both sexes					
All age groups	1,597	100	1,125	100	704
15-24	587	37	317	28	540
25-44	735	46	603	54	821
45+	276	17	205	18	743
Males					
All age groups	990	62	719	64	726
15-24	416	26	235	21	566
25-44	466	29	379	34	814
45+	109	7	104	9	960
Females					
All age groups	606	38	406	36	669
15-24	171	11	82	7	477
25-44	269	17	224	20	833
45+	167	10	100	9	602

¹ This amount under-estimates actual costs, as dollar values were not provided for 9% of incidents where financial loss/extra expenses were incurred. This group has been omitted from the calculations.

CHAPTER 4

PREVENTION OF ACCIDENTS

4.1 PERCEPTION OF PREVENTABILITY

HIGHLIGHTS

- Just over half (52%) of all accidents were viewed as being the result of carelessness or unsafe activity.
- Women were more likely than men to report that an accident was due to careless activity.
- In seven out of ten motor vehicle accidents, respondents reported that the event was a result of carelessness or unsafe activity.
- Among people who reported carelessness as a factor in motor vehicle accidents, four out of ten said that someone else's careless behaviour caused the accident. Three out of ten said it was their own fault and another three out of ten did not state a faulty party.
- Sports accidents were the least likely type of accident to be perceived as preventable.

METHODS

The preventability of accidents (F26) was assessed by asking respondents if, in their estimation, the accident was mainly:

- (1) caused by carelessness or unsafe activity
- (2) something that could not have been predicted or avoided.

Those respondents who thought that the accident was caused by carelessness or unsafe activity (F27) were asked if the accident was due to:

- (1) an employer's carelessness or unsafe working conditions,
- (2) their own carelessness or unsafe activity or
- (3) someone else's carelessness or unsafe activity.

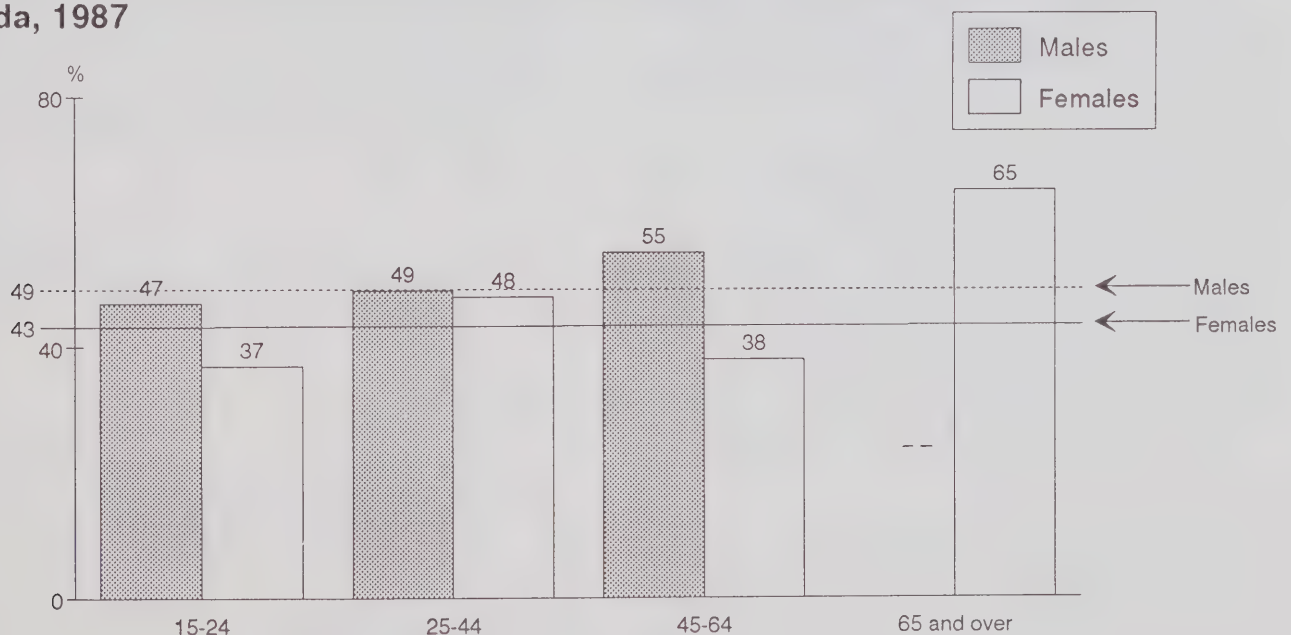
RESULTS

Attribution of Cause

Just over half, 52%, of all accidents were viewed as being the result of carelessness or unsafe activity (Table 13). The remainder were perceived to be unpredictable and unavoidable.

The perception of the preventability of accidents varied by type of accident. In seven out of ten motor vehicle accidents, respondents thought the event was a result of carelessness or unsafe activity. In contrast, 40% of work-related accidents and 36% of sports accidents were viewed as the result of unsafe activity. In 55% of home

Figure O
Proportion of accidents perceived to be unavoidable by age group and sex, Canada, 1987



General Social Survey, 1988

accidents and 53% of unclassified accidents, respondents cited unsafe activity as a factor.

Comparisons by sex revealed that 55% of women attributed the accident to carelessness compared with 50% of men. About 70% of motor vehicle and 40% of work accidents were regarded by both men and women as the result of unsafe activities or carelessness. However, there were gender differences in the perception of the preventability of sports, home and other accidents. In the case of sports accidents, 28% of men stated the accident was due to carelessness or unsafe activity compared with 51% of women. Conversely, 63% of men regarded home accidents as due to careless behaviour compared with 51% of women.

There were also age differences in the conception of accidents as unavoidable (Figure O). Older people, particularly older women, thought that the accidents were unavoidable. Younger people age 15-24, who had the most accidents, were less likely to perceive them as unavoidable. In the total population, men (49%) were more likely than women (43%) to perceive accidents as unavoidable.

Attribution of Blame for Accidents

Although a substantial proportion of the population stated that various types of accidents were due to carelessness or unsafe activity, people had difficulty in determining whether the accident was a result of their own careless behaviour, the carelessness of their employer or someone else (Table 13). For all accidents, 47% of the respondents did not specify a responsible party. By accident type, the percentage not stating varied from 30% for motor vehicle accidents to 64% for sports accidents.

Among all reported accidents, 31% of respondents blamed themselves for the accident and 18% blamed someone else. The proportions who blamed themselves differed by type of accident. In 47% of home accidents, people blamed themselves. However, the proportion of respondents who blamed themselves was substantially lower for unclassified (37%), motor vehicle (29%), sports (28%), and work (26%) accidents. In work-related accidents, 8% of workers stated that unsafe working conditions or an employer's carelessness was responsible for the event.

For all accidents, 16% of men and 22% of women attributed the careless behaviour of someone else. Respondents were most likely to blame someone else's careless activity in motor vehicle accidents (40%).

DISCUSSION

The tendency to report that accidents could not have been prevented raises questions about the perception of the causes of accidents. For some behaviours, it is possible that a certain amount of risk is inherent in the activity and accidents are perceived as an inevitable consequence of the activity. Perhaps people with a fatalistic attitude toward accidents may be less inclined to engage in preventive behaviour to reduce their risk.

What appears surprising is the high proportion of work-related accidents that were perceived as unavoidable. This finding is of public health concern because of the economic and social consequences of work accidents. What is equally surprising is the low percentage of employees who assign some responsibility for an accident to their employer or their work environment. Current epidemiological perspectives on the aetiology of accidents suggest that the causal and contributing factors in work-related accidents almost always include both human and environmental factors.¹

A high proportion of motor vehicle accidents were viewed as preventable and in most cases were viewed as the result of the careless activity or unsafe activity of someone else. Perhaps the tendency to ascribe responsibility to behavioural rather than environmental factors stems from the traditional reliance on police statistics for information related to the factors involved in accidents. Police statistics tend to focus on the driver and the assignment of personal responsibility, rather than on the complex set of environmental factors that are also a factor in accidents.² Due to the current nature of publicity regarding the importance of behavioural factors in motor vehicle accidents, the public may be more aware of the role of individual behaviour, rather than of environmental factors.

The perception of the preventability of accidents by Canadians suggests the need for information programs that address the social and environmental factors that lead to accidents.

NOTES

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4.2 PERCEPTION OF PERSONAL RISK

HIGHLIGHTS

- Both men and women perceived a greater chance of having a motor vehicle accident than all other types of accidents.
- For all types of accidents, people age 15-24 perceived a greater likelihood of having an accident than older people.

METHODS

One question which often arises in the course of studying accidents is the degree to which individuals assess their own risk of an accident in the future. Respondents were asked to rate (A28) the chances, on a scale of 0 (will never occur) to 10 (will occur), of experiencing one of the following accident types:

- (1) an aircraft accident
- (2) a car or motorcycle accident
- (3) an accident at work requiring medical attention
- (4) a road accident involving you as a pedestrian or on a bicycle
- (5) a home accident

TEXT TABLE O :

Mean perceived likelihood of selected events occurring to population¹ age 15 and over sometime in the future by age group, sex and event, Canada, 1987

Sex and event	All age groups	15-24	25-44	45-64	65+
Both sexes					
Home accident	3.0	3.6	3.1	2.5	2.6
Pedestrian or bicycle accident	2.6	3.4	2.8	2.2	1.7
Airplane accident	1.1	1.3	1.2	1.0	0.6
Car or motorcycle accident	4.4	5.2	4.8	3.8	2.7
Work accident	2.1	3.2	2.5	1.5	0.1
Males					
Home accident	2.8	3.3	2.9	2.3	2.3
Pedestrian or bicycle accident	2.4	3.0	2.5	2.0	1.7
Airplane accident	1.0	1.2	1.1	1.0	0.6
Car or motorcycle accident	4.3	5.1	4.7	3.7	2.7
Work accident	2.7	3.5	3.2	2.0	0.3
Females					
Home accident	3.2	3.9	3.3	2.7	2.8
Pedestrian or bicycle accident	2.9	3.7	3.1	2.4	1.7
Airplane accident	1.1	1.4	1.2	1.0	0.6
Car or motorcycle accident	4.4	5.3	4.9	3.9	2.7
Work accident	1.6	2.8	1.9	1.0	0.1

¹ Mean for responding population only. Scale ranges from 0 (will never occur) to 10 (will occur).

The question was designed to obtain a probability assessment of personal risk from respondents, however, it is limited by the fact that it did not specify a time period for the assessment. Consequently, if we assume a life expectancy of 76 years, a twenty-year-old respondent is being asked to assess the likelihood of an event over a 56-year period, whereas a 65 year old is being asked to assess the likelihood of an event that may occur over a much shorter period in time. It is not possible to know what frame of reference respondents used when answering the question. Some respondents may have answered with a life-time frame of reference, while others may have used the more immediate future as their frame of reference. Therefore, in presenting data, the responses were treated as interval variables and means were calculated for each event as a crude indicator of personal risk assessment.

RESULTS

Mean Perceived Risk

Of the total population, there was a considerable degree of variation in perception of the likelihood of being personally affected by accidents or selected events. Motor vehicle accidents had the highest mean perceived risk (4.4) followed by home accidents (3.0) (Text Table O). The remainder of events: bicycle and pedestrian accidents had a mean of 2.6 and work accidents a mean of 2.1. Aircraft accidents ranked lowest in terms of perceived personal risk (1.1).

Men and women ranked motor vehicle accidents and home accidents the leading personal risks. Both sexes assigned the lowest personal risk to aircraft accidents. The risk of a work-related accident was ranked higher among men (2.7) than women (1.6) which may be related to different labour force participation rates. Conversely, the risk of a home accident was ranked higher among women than men (3.2 versus 2.8).

Age comparisons suggest that for each event, people age 15-24 assigned higher average scores than other groups. With increasing age, the average score decreased, to reach the lowest average score in the 65 and over age group. This age-related pattern was apparent for both men and women.

In general, people with higher levels of education tended to perceive a greater personal risk from accidents and other selected events (Text Table P). With the exception of motor vehicle accidents and work accidents, there was an incremental increase in mean, with increases in education. In the case of motor vehicle and work accidents, there was a positive gradient with increasing education up to the some postsecondary school level.

DISCUSSION

In determining the concept of "risk", scientists have tended to view risk as a combination of the probability of an event happening combined with the consequences of the event. The factors which enter into the assessment of the consequences of an event may include a wide range

of economic, political, medical, and social factors. The perception of risk by individuals is complex, and may involve interaction between a number of factors. One theory of individual risk assessment suggests that the perception of risk is dependent on three major sets of factors: (1) the socio-demographic characteristics of the person, (2) situation-related characteristics such as the social and economic context at the time, and (3) the nature of the hazard or risk the person is assessing.¹

The findings in this report support the importance of socio-demographic factors in determining the perception of personal risk. In general, it appears that for most types of future events and accidents, women are more likely than men to believe that they are at greater personal risk. Youth are more likely than the older generation to perceive personal risk. It also appears that the more education a person has completed, the more likely they are to perceive a personal risk, for most types of accidents.

Perhaps the fact that women tend to have lower accident rates for most types of accidents is associated with their perception of personal risk and their subsequent behaviour. However, this argument does not explain why the younger age groups tend to have high accident rates for most types of accidents, in spite of their generally higher perception of personal risk. The limitations, in the question on personal risk that were cited earlier, make attempts at interpretation very tenuous. The area of risk perception and individual behaviour associated with risk perception would appear to warrant further investigation.

TEXT TABLE P:

Mean perceived likelihood of selected events occurring to population¹ age 15 and over over sometime in the future, by educational level and event, Canada, 1987

Event	Total	Some secondary or less	Secondary grad., trade school diploma etc.	Some post- secondary	Post- secondary degree or diploma
Home accident	3.0	3.0	2.9	3.0	3.1
Pedestrian or bicycle accident	2.6	2.5	2.6	2.7	2.8
Airplane accident	1.1	1.0	1.1	1.2	1.3
Car or motorcycle accident	4.4	4.0	4.5	4.6	4.6
Work accident	2.1	2.0	2.3	2.4	1.9

(1) Mean for responding population only. Scale ranges from 0 (will never occur) to 10 (will occur).

NOTE

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CHAPTER 5

OVERVIEW OF ACCIDENT TYPES

5.1 MOTOR VEHICLE ACCIDENTS

HIGHLIGHTS

- In 1987, Canadians reported 1.7 million motor vehicle accidents. These accidents represented 33% of all reported accidents.
- People who indicated that they were current drinkers were more likely to have had a motor vehicle accident than occasional drinkers or non-drinkers.
- Of all motor vehicle accidents, 45% occurred to people under age 25. Thirty-one percent of all motor vehicle accidents involved men age 15-24.
- In 1987, motor vehicle accidents were responsible for an estimated 762,000 hospital days. These represented 37% of all hospital days attributable to accidental injuries.
- Motor vehicle accidents were responsible for a total of 12 million activity-loss days, about 24% of the total activity-loss days resulting from accidents.
- Motor vehicle accident rates were greater among people in higher socio-economic groups.
- Motor vehicle accidents cost Canadians about 647 million dollars in out-of-pocket expenses. About 58% of all out-of-pocket expenses due to accidents were related to motor vehicle accidents.

METHODS

A motor vehicle accident could have involved any of the following vehicles - car, van, truck, motorcycle, snowmobile or an all terrain vehicle (F7). The incident need not have involved a moving motor vehicle to be classified as a motor vehicle accident. Vital statistics related to the period covered by the survey were used in combination with estimates from the General Social Survey to describe the pattern of motor vehicle accident morbidity and mortality.

RESULTS

Distribution of Motor Vehicle Accidents

Of all accidents, motor vehicle/traffic incidents accounted for about one third of all those reported (Table 2). Just under half of these accidents, 45%, involved people under age 25. Men age 15-24 were involved in 31% of all motor vehicle accidents.

Consequences of Motor Vehicle Accidents

Motor vehicle accidents represented about 55% of all property damage accidents (data not shown). While 39% of all accidents involved financial loss or extra expenses, 66% of motor vehicle accidents involved such expenses (Table 9). In 7% of all motor vehicle accidents, the person affected was admitted as an in-patient to a hospital, and 16% received treatment on an out-patient basis.

When accidents that involved only property damage are excluded from the estimates, the proportion of people who were injured in a motor vehicle accident and were admitted to hospital increases to 16% and the proportion of injured people who received out-patient hospital services was 40%.

In all age groups, motor vehicle accident rates were higher for men than women (Table 2). The highest rates were experienced by men and women age 15-24 at 249 and 126 per 1000, respectively. Injury occurred in 42% of all motor vehicle accidents. Of those injuries, 43% involved bruises, sprains or dislocations (Table 11). Multiple injuries occurred in 25% of accidents. These multiple injuries accounted for 44% of all multiple injuries from all types of accidents.

Approximately one third (32%) of motor vehicle accidents resulted in injury to multiple regions of the body (Table 12). In over half of all injuries involving multiple regions of the body, motor vehicle accidents were implicated. Motor vehicle accidents were more than twice as likely than other accident types to result in head or neck injuries. About 19% of all injuries that were the result of a motor vehicle accident involved the head and neck. Approximately 37% of all accidents which involved injuries to the head or neck were the result of motor vehicle accidents.

In 1987, motor vehicle accidents were responsible for 12 million activity-loss days, of which 2.6 million were bed-disability days, and 762,000 were hospital days (Text Table Q). The burden of disability was heaviest in the 15-24 age group. People age 15-24 accounted for one out of three (33%) activity-loss days and 36% of bed-disability days.

In 1987, people age 15 and over experienced an average of 598 activity-loss days, 131 bed-disability days and 38 hospital days per 1000 population as a result of motor vehicle accidents. Peak rates for each type of disability were observed for people age 15-24. With increasing age, rates tended to decline, reaching the lowest levels in the 45 and over age group. This pattern prevailed for both

TEXT TABLE Q :

Number of activity-loss days and rate per 1000 population attributed to motor vehicle/traffic accidents by type of activity-loss, sex and age group, Canada, 1987

Sex and age group	Activity-loss days		Bed-disability days		Hospital days	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
	No. in thousands					
Both sexes						
All age groups	12,071	598	2,636	131	762	38
15-24	3,942	967	961	236	--	--
25-44	5,558	654	1,232	145	--	--
45-64	2,444	492	--	--	--	--
65+	--	--	--	--	--	--
Males						
All age groups	6,315	638	1,616	163	--	--
15-24	2,619	1,259	472	227	--	--
25-44	2,830	667	882	208	--	--
45-64	--	--	--	--	--	--
65+	--	--	--	--	--	--
Females						
All age groups	5,757	559	1,020	99	--	--
15-24	1,323	663	--	--	--	--
25-44	2,728	640	--	--	--	--
45-64	--	--	--	--	--	--
65+	--	--	--	--	--	--

¹ For a small number of incidents, the number of days is not known, however, the total population has been included in the calculation of rates.

General Social Survey, 1988

men and women. For each type of disability day for which estimates are possible, men in the 15-24 age group had the highest average disability rates.

In the total population, approximately 24% of activity-loss days, 28% of bed-disability days and 37% of hospital days were attributable to a motor vehicle accident (Text tables J and Q).

DISCUSSION

Motor vehicle accidents are the leading cause of accidental mortality in Canada. Between 1951 and 1985, they were the leading cause of potential years of life lost (PYLL) among men age 25-74 and the third leading cause of PYLL among women.¹ This statistic does not take into account the impact of motor vehicle accidents on morbidity or disability.

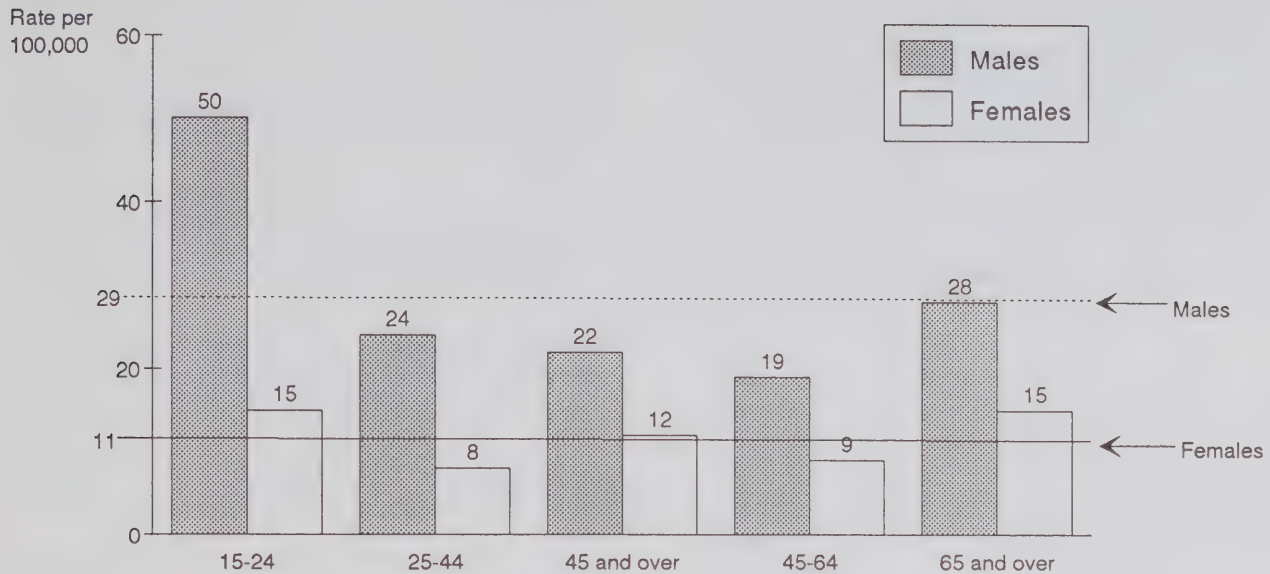
The age/sex pattern of mortality from motor vehicle accidents parallels that of motor vehicle accident rates. The highest mortality was found among young men age 15-24 (50 per 100,000) (Figure P). In all age groups, mortality rates were higher among men than women.

Vital statistics data for 1987 indicate that 3,950 people

age 15 and over died as a result of a motor vehicle accident and motor vehicle accidents were responsible for 30% of all accidental deaths in the population over age 15. The importance of motor vehicle accidents as a cause of death was greatest in the 15-24 age group. In this group, motor vehicle accidents represented about 50% of all accidental deaths and about 40% of deaths from all causes.

When motor vehicle accidents involve injuries, these injuries are likely to be serious because of the great physical forces involved. This explains why a higher proportion of motor vehicle accidents involved multiple injuries and multiple regions of the body. The injuries suffered in motor vehicle accidents also tend to be more severe and have long term sequelae. A recent American study indicated that motor vehicle accidents caused more than half of all spinal cord injuries, and nearly one half of all head injuries.²

Another study indicated that motor vehicle accidents caused approximately two thirds of all injuries to the chest organs (heart or lung), liver, and spleen and approximately one third of kidney injuries, traumatic pneumothorax, or haemothorax, femoral shaft fractures, pelvic fractures, intestinal injuries, patellar fractures, and head injuries. The percentage of all head injuries attributed to

Figure P**Rates of motor vehicle accident mortality per 100,000 population by age group and sex, Canada, 1987**

Canadian Centre For Health Information

motor vehicle accidents, in the General Social Survey, are similar to the preceding study.

The greater prevalence of motor vehicle accidents in young drivers has been noted frequently ^{4,5}. Higher rates among young drivers has been attributed to a combination of inexperience in driving, a greater tendency to engage in risk-taking behaviour and to underestimate the effect of alcohol and drugs on driving performance.^{6,7}

Some provinces and states have implemented driver training programs in an effort to reduce motor vehicle accidents among young drivers. However, an assessment of the effect of mandatory driver training in the province of Quebec concluded that the legislation had no effect on reducing the risk of a motor vehicle accident, or on the morbidity and mortality rate of newly-licensed drivers age 18 and over. The study also suggested that the effect of the mandatory driving training legislation was a reduction of the mean age of first driver's licence among women. This increased the numbers of women drivers and may have increased the risk of a motor vehicle accident among young women through increasing exposure.⁸

Other attempts to reduce motor vehicle fatalities among youth have focused on changes to the legal drinking age. A review of studies on the association between alcohol

consumption and fatalities concluded that raising the legal drinking age diminishes the prevalence of fatal motor vehicle accidents among younger drivers.⁹ A recent survey on Drinking and Driving in Canada showed that 67% of Canadians support raising the drinking age and 50% favour an increase in the driving age.¹⁰

During the early 1980s, age-standardized rates for motor vehicle accidents declined.¹¹ The reasons for the decline are complex and probably involve reduced exposure to risk as a result of reductions in the average number of miles driven per year by drivers, lower speed limits, the increased use of seat belts, more stringent enforcement of impaired driving legislation and improvements to the design of automobiles.

Prospects for a future decline in motor vehicle accident mortality will be influenced by a combination of behavioural, environmental and technological factors. Safety features that are engineered into motor vehicles and do not require the active compliance of the driver may be instrumental in reducing morbidity and mortality. Air bags that prevent injury in front-end collisions, and energy-absorbing automobile frames are examples of this technology.¹² The introduction of passive restraint systems will probably have a major public health impact in reducing mortality and injury.

NOTES

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5.2 WORK ACCIDENTS

HIGHLIGHTS

- In 1987, an estimated 1.1 million accidents occurred in the workplace. These accidents represented 21% of all reported accidents.
- About 60% of all work-related accidents were experienced by people age 25-44.
- Approximately 17 million days of activity-loss, 2.5 million days of bed-disability and 393 thousand in-patient hospital days resulted from work accidents.
- Work-related accidents were responsible for 34% of activity-loss days, 26% of bed-disability days and 19% of all reported hospital days.
- Work-related accidents were responsible for 39% of all spine and back injuries.
- In 1987, work-related accidents cost workers about 294 million dollars in out-of-pocket expenses. The average out-of-pocket expense for a work-related accident was \$1112.00.

METHODS

The 1988 General Social Survey asked respondents about the prevalence of accidents in the workplace (F10) and whether they had received Worker's Compensation benefits as a result of the accident (F11).

Respondents were also asked about out-patient and in-patient treatment for injuries (F20 and F21). The number of hospital days was used to develop an estimate of the hospital costs for work-related accidents. This cost does not take into account follow-up visits to physicians' offices, drugs, or rehabilitative services that are made on an out-patient basis.

Work-related accidental injuries have been defined by the International Labour Organization as "those recordable injuries resulting from accidents occurring at the place of work and resulting in death, personal injury or acute disease".¹

At present, there is considerable variation between countries in the classification and recording of work-related accidents. In recent years, some progress has been made in the development of a Canadian statistical work injuries data base. A National Work Injuries Statistics Program compiles data from Workers' Compensation Boards

in the provinces. Injury data from each board are coded according to the Z16.2 American National Standard. Industrial activity and occupation are standardized across provinces or are converted to the program standards to ensure comparable data, as much as possible. This source of data related to accidents probably under-estimates the prevalence of work-related accidents because only those accidents which resulted in an injury serious enough to warrant a Worker's Compensation claim is recorded.² In addition, even in cases in which legislation governs work accidents, not all injuries are reported. Injuries may be screened at a number of levels to reduce overall levels of administratively reported accidents.³ Since the data relate to the same time period as covered in the recent National Work Injury report, estimates from the two sources can be compared.

RESULTS

Distribution of Work Accidents

In 1987, 1.1 million accidents were work-related. This estimate represents about 21% of all accidents in that year (Table 2). Among men, 25% of all accidents occurred in the workplace compared with 14% among women. This difference may reflect differences between men and women in labour force participation rates and types of work. Average annual employment statistics were obtained from labour force surveys to calculate accident rates based on the population at risk.⁴

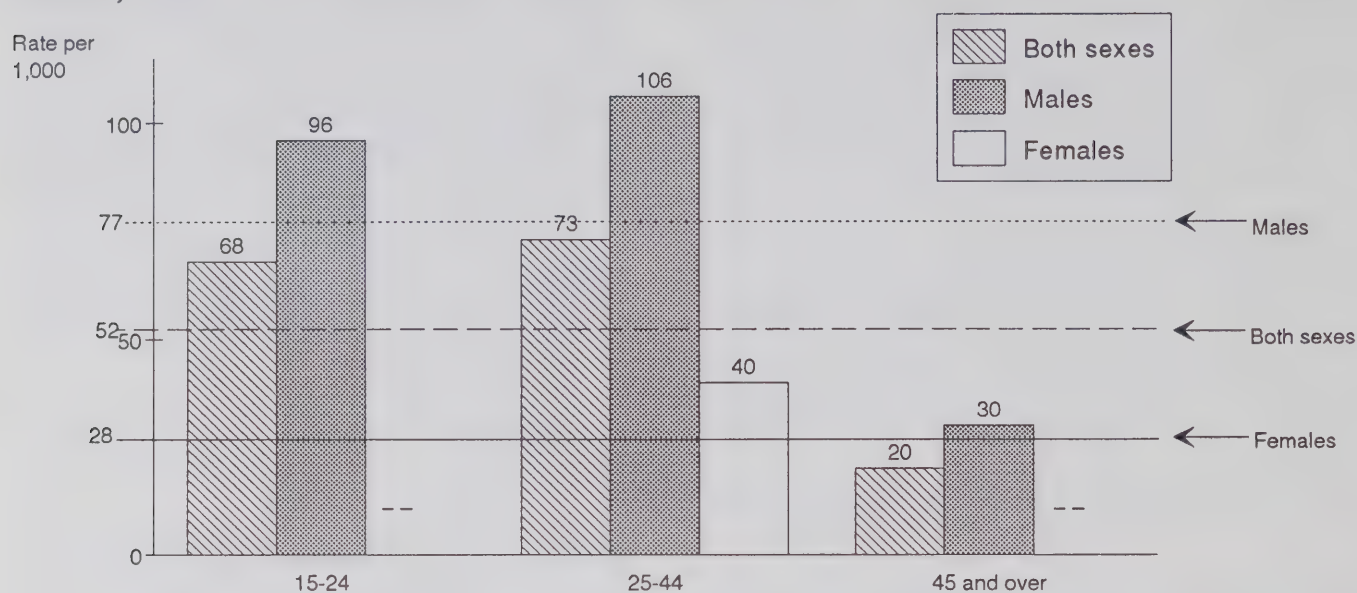
Among both men and women, there was a curvilinear relationship between age and the prevalence of work-related accidents (Figure Q). People entering or leaving the labour force tended to have a lower prevalence of work-related accidents. In all age groups, for which reliable estimates can be produced, men had higher accident rates than women. Overall, the 25-44 age group accounted for six out of ten work-related accidents.

Consequences of Work Accidents

The majority of work injuries involved dislocations/sprains/strains or bruises (39%) and cuts or scrapes (22%) (Table 11). About 10% of all work-related accidents involving injury, resulted in broken bones.

The pattern was similar among men and women, although, there were some differences in the relative importance of certain injuries. Dislocations/sprains/strains or bruises represented 36% of injuries to men and 45% to women.

Figure Q
Rates of work-related accidents per 1000 population by age group and sex,
Canada, 1987



General Social Survey, 1988

The extremities of the body were more likely than other regions of the body to be injured (Table 12). Injuries to the arms and hands and legs and feet accounted for 56% of injuries. Spine and back injuries represented 19%. About 39% of all reported spine and back injuries occurred in a work setting.

Both the GSS and statistics from Workers' Compensation data are consistent in the high percentage of work-related injuries that involve the back/spine. In the GSS, back/spine injuries represented 19% of work-related injuries compared with 27% in the Workers' Compensation Board data.³

Over one-half of all work-related accidents involved personal injuries that were serious enough to warrant outpatient treatment at a hospital (56%) (Table 9). Of work accidents, 40% resulted in bed-disability days and 9% involved an in-patient stay at hospital (Text Table R). Work-related accidents accounted for 34% of all activity-loss days, 26% of all bed-disability days and 19% of all hospital days for all accidents.

Work-related accidents cost workers approximately 294 million dollars in out-of-pocket personal expenses. The average out-of-pocket expense of a work-related accident was \$1112.00. This amount was considerably higher

than the out-of-pocket expenses associated with any other type of accident (Text Table M).

The impact of work accidents on medical care and disability is evident in Text Table R. In 1987, work-related accidents were responsible for 17.4 million activity-loss days, 2.5 million bed-disability days and 393,000 hospital days. Men were involved in two out of three (69%) activity-loss days.

Activity-loss day rates, in all age groups for which estimates can be made, were higher among men than women. Peak activity-loss rates among men occurred in the 45-64 age group (data not shown separately for this age group). Among women, the highest rate occurred in the 25-44 age group. For people age 25-44, the largest proportion of all activity-loss days were related to work-related injuries.

DISCUSSION

Accidents in the workplace are important not only from the point of view of the injured worker, but also because of the economic consequences of work injuries to employers. Losses to the national economy caused by them may amount to as much as 1%-4% of the gross national product.⁴

TEXT TABLE R :

Number of activity-loss days and rate per 1000 population attributed to work-related accidents by type of activity-loss, sex and age group, Canada, 1987

Sex and age group	Activity-loss days		Bed-disability days		Hospital days	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
	No. in thousands					
Both sexes						
All age groups	17,401	862	2,470	122	393	19
15-24	2,937	721	587	144	--	--
25-44	10,176	1,197	1,554	183	--	--
45+	4,288	563	--	--	--	--
Males						
All age groups	11,956	1,207	1,460	147	--	--
15-24	2,313	1,111	--	--	--	--
25-44	5,953	1,403	908	214	--	--
45+	3,689	1,030	--	--	--	--
Females						
All age groups	5,445	529	1,011	98	--	--
15-24	--	--	--	--	--	--
25-44	4,223	991	646	152	--	--
45+	--	--	--	--	--	--

¹ For a small number of incidents, the number of days is not known, however, the total population has been included in the calculation of rates.

General Social Survey, 1988

According to the GSS data, more than one million work accidents resulted in an injury in 1987. In comparison, the Worker's Compensation Boards across Canada accepted 602,531 time-loss claims for work-related injuries in this same year. These were injuries severe enough that employees needed to take time off work to recover.

The estimates of work-related injury in the GSS far exceed estimates of injury in the National Work Injury data base. This was expected because the data in the National Work Injury data base represent only those injuries that were adjudicated by a Workers' Compensation Board and recognized under existing workers' compensation legislation. In addition, not all sectors of the labour force are covered by Workers' Compensation.

Whether work injuries are recognized by formal boards or not, there is a considerable loss of productivity associated with those injuries due to days absent from work. A recent study of the economic consequences of occupational accidents estimated that, in 1980, the total costs exceeded 6.7 billion dollars.⁵

Given the high social and economic costs of work-related accidents and injuries, there is a need for a more systematic approach to the collection and analysis of data. As in other types of accidents, it is unlikely that only one type of research methodology is appropriate. Surveillance systems, case control studies, longitudinal studies, spe-

cial surveys and improvements to the existing ongoing data collection systems could all be expected to lead to improvements in reducing work accidents. With the increased use of microcomputers and computer communication technology, the development of carefully designed work accident surveillance systems would appear to be feasible, in both the private and public sectors.

NOTES

1. World Health Organization, *Epidemiology of Work-Related Diseases and Accidents*. Technical Report Series No.777. Geneva, 1989.
2. Statistics Canada. *Work Injuries, 1985-1987*. Catalogue 72-208, Ottawa, 1988.
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4. D. Gower, "The 1987 Labour Market Revisited". In: *The Labour Force*, Statistics Canada, Catalogue 71-001(monthly), January 1988.
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5.3 SPORTS ACCIDENTS

HIGHLIGHTS

- In 1987, there were 1.2 million sports-related accidents representing 23% of all accidents.
- Of all sports accidents, 65% occurred among men. Men age 15-24 accounted for 455,000 incidents or 38% of all sports accidents.
- Sports accidents were responsible for 29% of injuries to adults. Among people age 15-24, sports accidents were responsible for 42% of all unintentional injuries.
- Sports injuries accounted for approximately 8.7 million activity-loss days and 1.5 million bed-disability days in 1987. Sports injuries represented 31% of activity-loss days and 26% of bed-disability days for people age 15-24.
- Ice hockey was involved in 157,000 (13%) of accidents, cycling in 110,000 (9%) skiing and baseball in 95,000 each (8%).
- More than half, 57%, of sports-related accidents resulted in only bruise injuries (674,000), while 14% involved broken bones (165,000) and 11% (127,000) cuts and scrapes.
- Sports accidents were responsible for approximately one in three fractures (36%).
- Within regions, these accidents differed in terms of their importance. In the Atlantic Region, sports-related accidents accounted for 30% of all accidents compared with 18% in Quebec.

METHODS

Participation in sports carries with it a risk of potential injury. Current information about the incidence, prevalence and long term consequences of sports-related injuries, in Canada, is limited. Although it might be possible to obtain estimates of the number of Canadians who play sports in organized leagues, for some types of sports, these estimates would not reflect people who participated in those activities at an informal level.

Accident and injury data related to sports are not routinely collected, consequently, it is difficult to assess the impact of sports participation on injury and mortality rates. The GSS asked respondents if they had an accident

“while playing games or participating in sports during 1987”. This restrictive definition will result in lower estimates of accidents. Not all accidents result in an injury that is immediately apparent. In some instances, accidents will result in injuries that have medical implications long after the accident has been forgotten. However, these data provide an opportunity to obtain some limited insight into the extent of sports-related injuries.

RESULTS

Distribution of Sports-related Accidents

In 1987, about 1.2 million sports accidents occurred. These accounted for 23% of all accidents that year. Regardless of age, men were almost twice as likely as women to experience a sports-related accident. In 1987, men reported 773,000 sports-related incidents compared with 415,000 reported by women. People age 15-24 had the highest sports accident rate, 179/1000 (Figure R). Compared by sex, men had higher sports accident rates than women.

Consequences of Sports and Leisure Accidents

In 45% of all sports accidents, treatment was obtained on an out-patient basis (Table 9). Most sports accidents, 86%, involved activity-loss days and 41% resulted in bed-disability days.

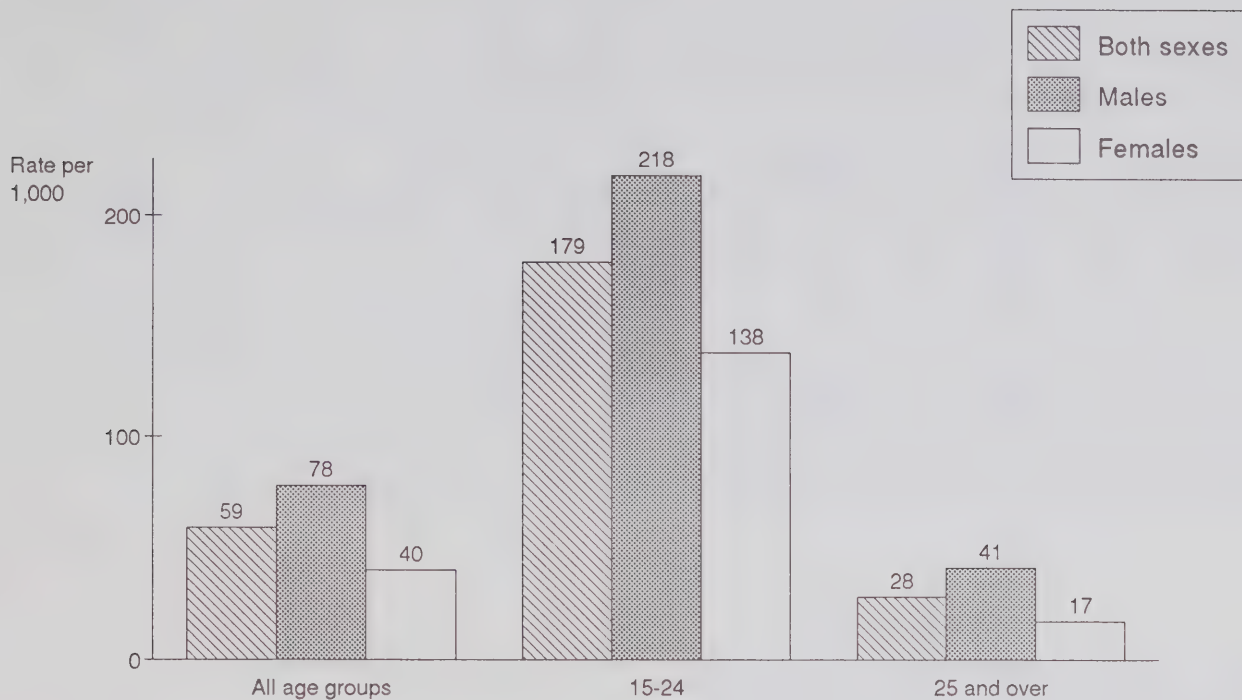
More than one half of all sports injuries (57%) involved bruises, strains and dislocations (Table 11). Fourteen percent of all sports injuries were fractures, 11% cuts and scrapes, and the remainder resulted in other types of injuries. Although only 14% of sports accidents involved broken bones, 36% of all accidents which involved broken bones were caused by sports accidents.

Of all sports injuries, 70% involved the extremities (Table 12). Both head/neck and spine/back injuries occurred in 8% of sports accidents and another 7% involved the trunk.

In 1987, sports accidents accounted for a total of 8.7 million activity-loss days and 1.5 million bed-disability days (Text Table S).

Disability rates as a result of sports accidents reflect patterns of participation in sports activities. Among both men and women, disability rates were much higher in the 15-24 age group than in the population age 25 and over. Overall, sports injuries accounted for about 17% of all restricted activity days and 16% of all bed-disability days that were accident related. Men and women in the 15-24

Figure R
Rates of sports accidents per 1000 population by age group and sex,
Canada, 1987



General Social Survey, 1988

age group had the highest proportion of disability days attributed to sports accidents. Among women age 15-24, sports accidents represented 43% of activity-loss days for all types of accidents for this group. In contrast, for men in the same age group, sports accidents accounted for 26% of activity-loss days.

DISCUSSION

One of the difficulties in asking a question about sports injuries, in a general survey, is the lack of information about the population at risk. Not all Canadians are at risk of experiencing such accidents because of differences in participation and activity levels. It is possible to obtain an approximation of the impact of sports accidents on mortality and injury rates by using available statistics to develop synthetic estimates of sports-specific injury rates.

Information on the proportion of the population that participates in various sports is available from the 1981 Canada Fitness Survey.¹ This survey asked a sample of Canadians about their participation in various sports.

Estimates of the proportion of the population who participate in various sports may serve as approximate denominators for the population at risk for sports-related injuries. An assumption is made that the participation rates for the selected sports have not changed greatly between 1981 and 1988. Estimates from the GSS provide the numerators for the calculation of injury rates. Accident and injury estimates obtained by this approach should be regarded as inherently imprecise. Participation levels for various sports vary greatly over time and the rates would not be an accurate measure of exposure to risk. The data also do not discriminate between sports played competitively and those that are casual. Sports-specific injury rates convey some information about the prevalence of acute injury but little about any long-term damage that may be sustained as a result of the continual stress associated with some activities.

Ice hockey was involved in 157,000 (13%) sports accidents, cycling 110,000 (9%); skiing and baseball, 95,000 accidents each (8%) and basketball, 84,000 (7%). Crude estimates of sports injury rates for basketball were 155/1000, 106/1000 for hockey, 63/1000 for baseball, 21/1000 for skiing and 17/1000 for cycling. Basketball, ice hockey and

TEXT TABLE S :

Number of activity-loss days and rate per 1000 population attributed to sports accidents by type of activity-loss, sex and age group, Canada, 1987

Sex and age group	Activity-loss days		Bed-disability days		Hospital days	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
	No. in thousands					
Both sexes						
All age groups	8,746	433	1,459	72	--	--
15-24	4,496	1,103	758	186	--	--
25+	4,250	264	701	44	--	--
Males						
All age groups	5,307	536	691	70	--	--
15-24	2,510	1,206	301	145	--	--
25+	2,797	357	390	50	--	--
Females						
All age groups	3,440	334	768	75	--	--
15-24	1,986	995	457	229	--	--
25+	1,454	175	--	--	--	--

¹ For a small number of incidents, the number of days is not known, however, the total population has been included in the calculation of rates.

General Social Survey, 1988

baseball are sports with a high risk of injury. These sports all involve some degree of body contact. Ice hockey has also been cited as a sport with a high injury rate and often involves spinal or neurological injury.² Studies in the United States have shown that basketball is the highest injury sport among women.³ Baseball contributes to a substantial proportion of sports injuries, although a recent assessment of sports and recreation injuries found little epidemiological data on injuries in organized baseball. The available data are based on emergency room treatment and suggests that about 70% of the injuries involve the extremities and about 20% the head.⁴

What appears surprising is that sports-related accidents resulted in almost as many out-patient hospital treatment visits (535,000) as did those that were work-related accidents (591,000). The limited data related to sports injuries in this report would suggest that sports injuries constitute an important public health problem whose epidemiological dimensions need to be more clearly defined. Much of the current research on sports accidents and injuries is of a clinical nature, or is confined to small samples.

There is also a need for a balanced assessment of the contribution of participation in sports and physical fitness programs to overall health status. Although there is an element of risk in all sports and recreation activities, the net benefit of physical activity to health status and the

quality of life, may be greater than the benefit of a sedentary lifestyle.

There is much epidemiological literature that suggests participation in sports activities could play a role in reducing cardiovascular disease, maintaining an acceptable body weight, controlling blood pressure, and improving general physiological functioning. A recent study suggests that participants in sports activities had measurable gains in health status compared to those who were not physically active. However, the study was cross-sectional in nature and therefore cannot separate out the causal pathways between participation in sports and health status.⁵ A prospective study of healthy adults suggests that physical fitness is conducive to reduced total mortality, cardiovascular mortality, and mortality from cancer.⁶ To the extent that participation in sports is associated with improved cardiovascular health and a greater degree of functional autonomy as a result of better physical fitness in old age, the net benefit of sports activity may be beneficial. From a public health perspective, it would seem reasonable to encourage overall increases in physical activity in the population, while at the same time reducing the risks associated with it.

NOTES

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2. C.W. Runyan, E.A. Gerkin, "Epidemiology and Prevention of Adolescent Injury. A Review and Research Agenda". *JAMA*, 1989; 262(No.2):2273-2279.
3. C.H. Tator, V.E. Edmonds, "National Survey of Spinal Injuries in Hockey Players". *CMAJ*, 1984; 130:875-880.
4. T. Chandy, W. Grana, "Secondary School Athletic Injury in Boys and Girls: A Three-Year Comparison". *Physician Sportsmed*, 1983; 11:122-139.
5. J.F. Kraus, C. Conroy, "Mortality and Morbidity from Injuries in Sports and Recreation". *Annual Review of Public Health*, 1984; 5:163-192.
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5.4 HOME ACCIDENTS

HIGHLIGHTS

- In 1987, an estimated 670,000 accidents occurred in the home. These accidents represented 13% of all reported incidents.
- For people age 65 and over, 45% of all accidents occurred in the home.
- Home accident rates were nearly 70% higher for women than for men (42 per 1000 versus 25 per 1000 men).
- Home accidents accounted for approximately 7 million activity-loss days and 1.4 million bed-disability days.
- In 1987, home accidents cost Canadians 83 million dollars in out-of-pocket expenses.

METHODS

An accident was defined as an event that resulted in activity limitation for at least half a day or resulted in property damage of \$200 or more. One of the difficulties in defining an accident in this manner is that an accident, by definition, results in an unintentional injury. Events

which may have the potential to cause injury do not have relevance in this definition. In the case of falls among older respondents, the fall would only be reported if an injury occurred. Yet the act of falling, particularly among the elderly, is itself of epidemiological interest, as it may signal changes in the health status of the older individual. Knowledge of falling behaviour could be an incentive to ascertain the physical, social, environmental, and medical treatment factors that may be associated with the fall.

RESULTS

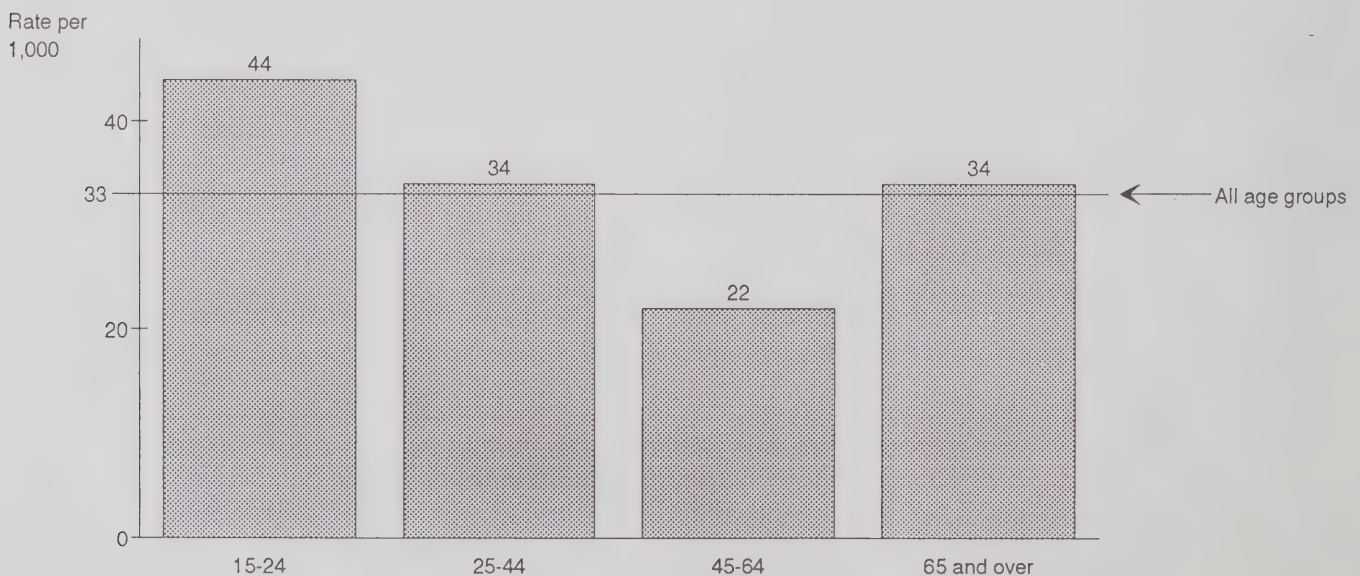
Distribution of Home Accidents

Home accident rates varied by age group; young adults were more likely than others to have a home accident (Figure S). In 1987, the rate of home accidents among people age 15-24 was 44/1000 compared with 34/1000 for both the 25-44 and 65 and over age groups. The rate for people age 45-64 was 22/1000. Also, women had a higher home accident rate than men, 42/1000 versus 25/1000 (Table 2).

Consequences of Home Accidents

Of all injuries in home accidents, 30% involved bruises and sprains (Table 11). Cuts and scrapes accounted for 28% and other types of injuries, 42%.

Figure S
Rates of home accidents per 1000 population by age group, Canada, 1987



General Social Survey, 1988

TEXT TABLE T :

Number of activity-loss days and rate per 1000 population attributed to home accidents by type of activity-loss, sex and age group, Canada, 1987

Sex and age group	Activity-loss days		Bed-disability days		Hospital days	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
	No. in thousands					
Both sexes						
All age groups	7,098	352	1,365	68	--	--
15-24	1,270	312	237	58	--	--
25-44	2,200	259	333	39	--	--
45-64	1,575	317	--	--	--	--
65+	2053	775	--	--	--	--
Males						
All age groups	2,769	280	443	45	--	--
15-24	--	--	--	--	--	--
25-44	--	--	--	--	--	--
45-64	--	--	--	--	--	--
65+	--	--	--	--	--	--
Females						
All age groups	4,329	421	922	90	--	--
15-24	413	207	--	--	--	--
25-44	1,195	280	--	--	--	--
45-64	--	--	--	--	--	--
65+	--	--	--	--	--	--

¹ For a small number of incidents, the number of days is not known, however, the total population has been included in the calculation of rates.

General Social Survey, 1988

The majority of home injuries involved the extremities of the body (Table 12). Injuries to the legs/feet and arms/hands accounted for 58% of all injuries. Spine/back injuries and trunk injuries each accounted for 14% of all injuries.

Falls comprised 43% of all home accidents; 40% of all home incidents for men and 45% for women. Rates were nearly twice as high among women than men, 19/1000 versus 10/1000, respectively (data not shown).

Approximately 7 million activity-loss days and 1.4 million bed-disability days (Text Table T) were the result of home accidents. These estimates represent about 14% and 15%, respectively, of all activity-loss days and all bed-disability days.

The activity-loss day rate for home accidents was 352/1000 and the bed-disability day rate was 68/1000. This distribution of disability closely parallels the prevalence of accidents by age and sex. People age 15-24 and age 65 and over were more likely to experience home accidents than other groups and generally had the highest disability rates.

Comparison by sex indicated that in the total population, the disability rates of men for home accidents were lower than those of women (280/1000 as compared with 421/1000).

DISCUSSION

The prevalence of home accidents in North America and many developed countries is considerably less than in some of the developing countries.¹ Nevertheless, in Canada, home accidents represent an important health risk to the elderly and the very young. Home accidents are most prevalent among these groups because their day-to-day activities are likely to be focused on the home environment. Consequently, their degree of exposure to a home accident is higher.

The role of the home, as an environment for accidents and injuries, is important for both epidemiological and social policy reasons. Current social philosophy stresses the desirability of the aged population functioning as independently as possible, in their own homes. For many older people, the threat of an accident that leaves them dependent on others or results in hospitalization is a major concern.

Although home accident rates for the older population suggest that they are not the highest risk group, the consequences appear to be more severe as they have the highest activity-loss day rate of any group. For the period 1971-1986, a review of the leading causes of morbidity and mortality in Canada's elderly population, indicated accidental falls ranked 15th as a cause of death among men 65 years and over and 10th among elderly women. For the period 1979-1983, fractures of the lower limb were one of the ten leading causes of hospitalization for elderly women and represented a total of 15,575 hospital separations resulting in approximately 500,000 hospital days. The average duration per case was 35.8 days.¹

NOTE

1. J. Waller, "Injury as a Public Health Problem". In: Maxcy-Rosenau, *Public Health and Preventive Medicine*. John Last (Ed.) Appleton-Century-Crofts, New York, 1984; p.1570.

APPENDIX 1

TABLES

TABLE 1 :
Population age 15 and over by accident incidents, sex and age group, Canada, 1987

Sex and age group	Total population		None		Number with accidents						Not stated	
					Total		One		Two+			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands											
Both sexes												
All age groups	20,194	100	16,243	80	3,760	19	2,909	14	851	4	190	1
15-24	4,076	100	2,702	66	1,353	33	899	22	454	11	--	--
25-44	8,505	100	6,753	79	1,685	20	1,359	16	325	4	67	1
45-64	4,964	100	4,355	88	534	11	477	10	57	1	76	2
65+	2,650	100	2,434	92	189	7	174	7	--	--	26	1
Males												
All age groups	9,905	100	7,595	77	2,228	22	1,702	17	526	5	82	1
15-24	2,081	100	1,208	58	863	41	577	28	286	14	--	--
25-44	4,243	100	3,165	75	1,035	24	831	20	204	5	42	1
45-64	2,445	100	2,144	88	275	11	245	10	29	1	26	1
65+	1,136	100	1,077	95	55	5	49	4	--	--	--	--
Females												
All age groups	10,289	100	8,648	84	1,533	15	1,207	12	326	3	108	1
15-24	1,995	100	1,494	75	490	25	322	16	169	8	--	--
25-44	4,262	100	3,588	84	649	15	528	12	121	3	25	1
45-64	2,518	100	2,210	88	259	10	231	9	28	1	49	2
65+	1,514	100	1,357	90	134	9	126	8	--	--	--	--

TABLE 2 :
Number of accidents and accident rates per 1000 population by type of accident, sex and age group, Canada, 1987

Sex and age group	Total population		Total accidents		Type of accident								
				Motor vehicle/traffic		Work related		Sports related		Home and surroundings		Unclassified	
	No	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
	No. in thousands												
Both sexes													
All age groups	20,194	5,127	254	1,697	84	1,052	52	1,188	59	670	33	520	26
15-24	4,076	2,170	532	770	189	277	68	729	179	179	44	214	53
25-44	8,505	2,150	253	692	81	622	73	390	46	289	34	157	18
45-64	4,964	603	121	205	41	139	28	--	--	111	22	94	19
65+	2,650	204	77	--	--	--	--	--	--	91	34	--	--
Males													
All age groups	9,905	3,062	309	1,057	107	760	77	773	78	243	25	230	23
15-24	2,081	1,364	655	519	249	200	96	455	218	82	39	108	52
25-44	4,243	1,330	314	417	98	451	106	278	66	100	23	84	20
45-64	2,445	307	126	114	47	101	41	--	--	--	--	--	--
65+	1,136	--	--	--	--	--	--	--	--	--	--	--	--
Females													
All age groups	10,289	2,064	201	641	62	292	28	415	40	428	42	290	28
15-24	1,995	806	404	251	126	--	--	275	138	97	49	106	53
25-44	4,262	820	192	275	64	171	40	112	26	189	44	--	--
45-64	2,518	295	117	91	36	--	--	--	--	--	--	--	--
65+	1,514	143	94	--	--	--	--	--	--	--	--	--	--

da, 1987

Country	Home and surroundings		Unclassified	
	No.	%	No.	%
Algeria	670	13	520	10
Angola	53	15	38	10
Argentina	115	13	56	6
Australia	178	10	215	12
Austria	140	13	113	11
Belgium	186	19	98	10
Brazil	179	8	214	10
Canada	--	--	23	13
Chad	--	--	--	--
China	--	--	--	--
Czech Republic	30	7	47	11
Denmark	65	15	--	--
Egypt	289	13	157	7
France	--	--	--	--
Germany	48	11	--	--
Greece	--	--	--	--
India	52	12	34	8
Indonesia	87	22	--	--
Italy	202	25	149	18
Japan	20	37	--	--
Kenya	--	--	--	--
Libya	--	--	--	--
Mexico	58	32	33	18
Netherlands	--	--	--	--
Nigeria	243	8	230	8
Poland	19	9	--	--
Romania	--	--	--	--
Russia	--	--	--	--
South Africa	42	7	38	6
South Korea	69	13	47	9
Spain	82	6	108	8
Sweden	--	--	--	--
Switzerland	--	--	--	--
Taiwan	--	--	--	--
Tanzania	--	--	--	--
Thailand	100	7	84	6
Tunisia	--	--	--	--
United Kingdom	--	--	--	--
United States	--	--	--	--
Ukraine	--	--	--	--
Uzbekistan	--	--	--	--
Vietnam	--	--	--	--
Yemen	--	--	--	--
Zimbabwe	--	--	--	--

TABLE 3 :

Number of accidents by type of accident, sex, age group and region, Canada, 1987 — concluded

Sex, age group and region	Total accidents		Type of accident									
			Motor vehicle/traffic		Work related		Sports related		Home and surroundings		Unclassified	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands											
Females												
All age groups												
Canada	2,064	100	641	31	292	14	415	20	428	21	290	14
Atlantic	142	100	29	20	20	14	39	28	33	23	21	15
Quebec	293	100	114	39	--	--	--	--	71	24	--	--
Ontario	734	100	239	33	149	20	121	17	--	--	--	--
Prairies	455	100	147	32	28	6	107	24	97	21	75	17
British Columbia	441	100	111	25	58	13	104	24	116	26	51	12
15-24												
Canada	806	100	251	31	--	--	275	34	97	12	106	13
Atlantic	76	100	--	--	--	--	29	39	--	--	--	--
Quebec	99	100	--	--	--	--	--	--	--	--	--	--
Ontario	253	100	--	--	--	--	--	--	--	--	--	--
Prairies	188	100	70	37	--	--	65	34	--	--	--	--
British Columbia	189	100	48	26	--	--	66	35	--	--	--	--
25-44												
Canada	820	100	275	34	171	21	112	14	189	23	--	--
Atlantic	37	100	--	--	--	--	--	--	--	--	--	--
Quebec	115	100	56	49	--	--	--	--	--	--	--	--
Ontario	327	100	--	--	--	--	--	--	--	--	--	--
Prairies	165	100	61	37	--	--	33	20	33	20	--	--
British Columbia	177	100	--	--	--	--	--	--	59	34	--	--
45+												
Canada	438	100	114	26	--	--	--	--	141	32	111	25
Atlantic	29	100	--	--	--	--	--	--	--	--	--	--
Quebec	79	100	--	--	--	--	--	--	--	--	--	--
Ontario	154	100	--	--	--	--	--	--	--	--	--	--
Prairies	101	100	--	--	--	--	--	--	44	43	27	27
British Columbia	76	100	--	--	--	--	--	--	--	--	--	--

General Social Survey, 1988

TABLE 4 :

Number of accidents by season of occurrence and type of accident, Canada, 1987

Type of accident	Total accidents		Season of occurrence									
			Winter (Dec, Jan, Feb)		Spring (March, April, May)		Summer (June, July, Aug)		Autumn (Sept, Oct, Nov)		Don't Know/Not Stated	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands											
All incidents	5,127	100	1,148	22	939	18	1,584	31	1,192	23	264	5
Motor vehicle/traffic	1,697	100	430	25	315	19	493	29	419	25	--	--
Work related	1,052	100	155	15	216	21	371	35	245	23	--	--
Sports related	1,188	100	294	25	201	17	386	33	263	22	--	--
Home and surroundings	670	100	163	24	122	18	168	25	155	23	--	--
Unclassified	520	100	107	21	85	16	167	32	110	21	--	--

General Social Survey, 1988

TABLE 5 :
Number of accidents by time of occurrence and type of accident, Canada, 1987

Type of accident	Total accidents		Time of occurrence																Don't know/not stated	
			During the day								During the night									
			Total		8 am - 12 noon		12 noon - 6 pm		Day/don't know		Total		6 pm - 12 midnight		12 midnight - 8 am		Night/don't know			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands																			
All incidents	5,127	100	3,471	68	1,041	20	2,328	45	102	2	1,489	29	1,196	23	288	6	--	--	167	3
Motor vehicle/traffic	1,697	100	1,157	68	299	18	807	48	--	--	538	32	383	23	155	9	--	--	--	--
Work related	1,052	100	814	77	376	36	431	41	--	--	199	19	129	12	--	--	--	--	--	--
Sports related	1,188	100	756	64	102	9	628	53	--	--	401	34	381	32	--	--	--	--	--	--
Home and surroundings	670	100	428	64	162	24	261	39	--	--	213	32	191	29	--	--	--	--	--	--
Unclassified	520	100	316	61	102	20	201	39	--	--	138	26	111	21	--	--	--	--	--	--

General Social Survey, 1988

TABLE 6 :
Number of accidents by location and type of accident, Canada, 1987

Type of accident	Total accidents		Location									
			Home and surrounding area		Commercial/institutional		Street/outdoors		Elsewhere		Not stated	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands											
All incidents	5,127	100	826	16	1,578	31	2,360	46	280	5	--	--
Motor vehicle/traffic	1,697	100	--	--	--	--	1,564	92	--	--	--	--
Work related	1,052	100	--	--	692	66	184	18	136	13	--	--
Sports related	1,188	100	--	--	711	60	370	31	--	--	--	--
Home and surroundings	670	100	670	100	--	--	--	--	--	--	--	--
Unclassified	520	100	--	--	130	25	243	47	--	--	--	--

General Social Survey, 1988

TABLE 7 :

Population age 15 and over involved in an accident between January 1985 and January 1988 by number of accidents, sex and type of drinker, Canada, 1987

Sex and type of drinker	Total population		No accidents		Number with accidents								Not stated	
					Total		One accident		Two/three accidents		Four or more accidents			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands													
Both sexes														
Total - type of drinker	20,194	100	12,038	60	7,454	37	4,167	21	2,256	11	1,032	5	701	3
Non drinker	4,243	100	2,976	70	1,128	27	695	16	309	7	124	3	139	3
Occasional drinker	3,897	100	2,440	63	1,321	34	816	21	351	9	154	4	135	3
Total - current drinkers	11,793	100	6,504	55	4,945	42	2,607	22	1,593	14	744	6	343	3
Less than 1 drink/week	4,775	100	2,706	57	1,925	40	1,017	21	639	13	269	6	144	3
1-6 drinks/week	5,046	100	2,920	58	1,998	40	1,124	22	623	12	250	5	128	3
7-13 drinks/week	1,404	100	648	46	712	51	333	24	235	17	144	10	44	3
14 drinks or more/week	503	100	195	39	283	56	121	24	87	17	75	15	25	5
Volume unknown	64	100	36	55	27	41	--	--	--	--	--	--	--	--
Not stated	261	100	118	45	60	23	48	18	--	--	--	--	83	32
Males														
Total - type of drinker	9,905	100	5,250	53	4,315	44	2,186	22	1,401	14	728	7	339	3
Non drinker	1,574	100	962	61	560	36	310	20	175	11	75	5	52	3
Occasional drinker	1,313	100	737	56	536	41	283	22	167	13	85	6	41	3
Total - current drinkers	6,892	100	3,508	51	3,185	46	1,564	23	1,059	15	561	8	200	3
Less than 1 drink/week	2,312	100	1,192	52	1,047	45	501	22	374	16	172	7	72	3
1-6 drinks/week	2,994	100	1,628	54	1,286	43	688	23	402	13	196	7	81	3
7-13 drinks/week	1,094	100	492	45	567	52	261	24	190	17	117	11	35	3
14 drinks or more/week	443	100	168	38	266	60	109	25	85	19	71	16	--	--
Volume unknown	49	100	28	57	--	--	--	--	--	--	--	--	--	--
Not stated	125	100	44	35	35	28	28	23	--	--	--	--	46	37
Females														
Total - type of drinker	10,289	100	6,788	66	3,139	31	1,980	19	854	8	304	3	362	4
Non drinker	2,669	100	2,014	75	568	21	385	14	133	5	50	2	87	3
Occasional drinker	2,584	100	1,704	66	786	30	533	21	184	7	69	3	94	4
Total - current drinkers	4,900	100	2,996	61	1,760	36	1,043	21	534	11	183	4	144	3
Less than 1 drink/week	2,463	100	1,514	61	878	36	516	21	264	11	97	4	71	3
1-6 drinks/week	2,052	100	1,293	63	712	35	436	21	221	11	55	3	47	2
7-13 drinks/week	310	100	156	50	145	47	73	23	45	15	27	9	--	--
14 drinks or more/week	60	100	27	44	--	--	--	--	--	--	--	--	--	--
Volume unknown	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Not stated	137	100	75	55	25	19	--	--	--	--	--	--	36	27

General Social Survey, 1988

TABLE 8 :

Number of accidents and accident rates per 1000 population by type of accident, age group and type of drinker, Canada, 1987

Age group and type of drinker	Total population		Total accidents		Type of accident									
					Motor vehicle/traffic		Work related		Sport related		Home and surroundings		Unclassified	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
	No. in thousands													
All age groups														
Total - type of drinker	20,194	5,127	254	1,697	84	1,052	52	1,188	59	670	33	520	26	
Non drinker	4,243	712	168	217	51	99	23	165	39	163	38	--	--	
Occasional drinker	3,897	889	228	277	71	178	46	224	57	110	28	101	26	
Total - current drinkers	11,793	3,472	294	1,189	101	760	64	792	67	391	33	341	29	
Less than 1 drink/week	4,775	1,338	280	488	102	249	52	318	67	179	37	105	22	
1-6 drinks/week	5,046	1,246	247	398	79	299	59	245	48	151	30	153	30	
7-13 drinks/week	1,404	575	410	200	143	149	106	142	101	--	--	--	--	
14 drinks or more/week	503	297	589	100	198	--	--	84	168	--	--	--	--	
Volume unknown	64	--	--	--	--	--	--	--	--	--	--	--	--	
Not stated	261	--	--	--	--	--	--	--	--	--	--	--	--	
15-24														
Total - type of drinker	4,076	2,170	532	770	189	277	68	729	179	179	44	214	53	
Non drinker	754	328	435	87	115	--	--	127	168	--	--	--	--	
Occasional drinker	863	387	448	98	113	--	--	168	194	--	--	--	--	
Total - current drinkers	2,445	1,455	595	585	239	184	75	434	178	101	41	149	61	
Less than 1 drink/week	1,181	650	550	264	224	--	--	211	178	--	--	--	--	
1-6 drinks/week	855	393	460	158	185	--	--	97	114	--	--	--	--	
7-13 drinks/week	262	244	931	101	387	--	--	--	--	--	--	--	--	
14 drinks or more/week	138	161	1,160	--	--	--	--	--	--	--	--	--	--	
Volume unknown	--	--	--	--	--	--	--	--	--	--	--	--	--	
Not stated	--	--	--	--	--	--	--	--	--	--	--	--	--	
25-44														
Total - type of drinker	8,505	2,150	253	692	81	622	73	390	46	289	34	157	18	
Non drinker	1,234	261	211	95	77	--	--	--	--	--	--	--	--	
Occasional drinker	1,563	303	194	111	71	88	56	--	--	--	--	--	--	
Total - current drinkers	5,615	1,556	277	480	86	470	84	306	54	183	33	118	21	
Less than 1 drink/week	2,149	532	248	184	86	151	70	96	45	--	--	--	--	
1-6 drinks/week	2,591	665	257	195	75	192	74	129	50	96	37	--	--	
7-13 drinks/week	632	243	384	--	--	95	150	--	--	--	--	--	--	
14 drinks or more/week	210	109	516	--	--	--	--	--	--	--	--	--	--	
Volume unknown	32	--	--	--	--	--	--	--	--	--	--	--	--	
Not stated	92	--	--	--	--	--	--	--	--	--	--	--	--	
45-64														
Total - type of drinker	4,964	603	121	205	41	139	28	--	--	111	22	94	19	
Non drinker	1,141	--	--	--	--	--	--	--	--	--	--	--	--	
Occasional drinker	922	146	158	--	--	--	--	--	--	--	--	--	--	
Total - current drinkers	2,793	372	133	107	38	103	37	--	--	--	--	--	--	
Less than 1 drink/week	1,011	121	120	--	--	--	--	--	--	--	--	--	--	
1-6 drinks/week	1,254	153	122	--	--	--	--	--	--	--	--	--	--	
7-13 drinks/week	381	--	--	--	--	--	--	--	--	--	--	--	--	
14 drinks or more/week	128	--	--	--	--	--	--	--	--	--	--	--	--	
Volume unknown	--	--	--	--	--	--	--	--	--	--	--	--	--	
Not stated	109	--	--	--	--	--	--	--	--	--	--	--	--	
65+														
Total - type of drinker	2,650	204	77	--	--	--	--	--	--	91	34	--	--	
Non drinker	1,114	--	--	--	--	--	--	--	--	--	--	--	--	
Occasional drinker	549	--	--	--	--	--	--	--	--	--	--	--	--	
Total - current drinkers	940	90	95	--	--	--	--	--	--	--	--	--	--	
Less than 1 drink/week	433	--	--	--	--	--	--	--	--	--	--	--	--	
1-6 drinks/week	346	--	--	--	--	--	--	--	--	--	--	--	--	
7-13 drinks/week	129	--	--	--	--	--	--	--	--	--	--	--	--	
14 drinks or more/week	26	--	--	--	--	--	--	--	--	--	--	--	--	
Volume unknown	--	--	--	--	--	--	--	--	--	--	--	--	--	
Not stated	47	--	--	--	--	--	--	--	--	--	--	--	--	

TABLE 9 :
Number of accidents by consequence, sex and type of accident, Canada, 1987

Sex and type of accident	Total		Injury ¹		Medical attention in hospital				Medical attention outside hospital ¹		Resulted in bed days ¹		Resulted in activity loss days ¹		Financial loss ¹		Financial loss and compensation ¹	
					Outpatient care ¹				Inpatient care ¹									
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
No. in thousands																		
Both sexes																		
All incidents	5,127	100	4,044	79	1,908	37	386	8	871	17	1,846	36	4,061	79	2,021	39	872	17
Motor vehicle/traffic	1,697	100	707	42	280	16	112	7	135	8	388	23	1,025	60	1,114	66	548	32
Work related	1,052	100	1,034	98	591	56	90	9	229	22	425	40	1,002	95	395	38	209	20
Sports related	1,188	100	1,181	99	535	45	--	--	300	25	483	41	1,025	86	231	19	--	--
Home and surroundings	670	100	662	99	294	44	--	--	118	18	310	46	590	88	152	23	--	--
Unclassified	520	100	461	89	209	40	--	--	89	17	240	46	419	81	129	25	--	--
Males																		
All incidents	3,062	100	2,402	78	1,225	40	242	8	446	15	1,007	33	2,402	78	1,273	42	534	17
Motor vehicle/traffic	1,057	100	448	42	173	16	--	--	--	--	238	23	637	60	689	65	313	30
Work related	760	100	742	98	458	60	--	--	149	20	302	40	720	95	282	37	156	21
Sports related	773	100	766	99	368	48	--	--	161	21	258	33	665	86	172	22	--	--
Home and surroundings	243	100	240	99	121	50	--	--	--	--	115	47	199	82	--	--	--	--
Unclassified	230	100	206	90	105	46	--	--	--	--	94	41	181	79	--	--	--	--
Females																		
All incidents	2,064	100	1,642	80	683	33	144	7	425	21	839	41	1,658	80	749	36	338	16
Motor vehicle/traffic	641	100	259	40	106	17	--	--	--	--	150	23	388	61	425	66	235	37
Work related	292	100	292	100	133	45	--	--	--	--	123	42	282	97	113	39	--	--
Sports related	415	100	415	100	167	40	--	--	139	34	225	54	360	87	--	--	--	--
Home and surroundings	428	100	421	99	173	40	--	--	86	20	195	46	391	92	--	--	--	--
Unclassified	290	100	255	88	103	36	--	--	--	--	146	50	238	82	--	--	--	--

¹ Number and proportion do not add to total as these are separate variables. Only number and proportion of affirmative responses shown.

TABLE 10 :
Number of accidents with injuries by type of injury, sex and age group, Canada, 1987

Sex and age group	Total accidents with injuries		Type of injury															
			Broken or fractured bone(s)		Burn or scald		Dislocation, sprain, strain or bruise		Cut or scrape		Poisoning by substance or liquid		Other		More than one injury		Not stated	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands																	
Both sexes																		
All age groups	4,044	100	464	11	134	3	1,728	43	700	17	192	5	404	10	398	10	--	--
15-24	1,728	100	179	10	--	--	729	42	349	20	103	6	141	8	173	10	--	--
25-44	1,681	100	163	10	--	--	734	44	254	15	--	--	202	12	176	10	--	--
45-64	459	100	--	--	--	--	192	42	--	--	--	--	--	--	--	--	--	--
65+	176	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Males																		
All age groups	2,402	100	271	11	--	--	1,003	42	452	19	98	4	278	12	212	9	--	--
15-24	1,083	100	123	11	--	--	441	41	238	22	--	--	84	8	101	9	--	--
25-44	1,042	100	95	9	--	--	458	44	167	16	--	--	155	15	96	9	--	--
45-64	221	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
65+	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Females																		
All age groups	1,642	100	193	12	--	--	725	44	248	15	94	6	126	8	186	11	--	--
15-24	645	100	--	--	--	--	288	45	110	17	--	--	--	--	--	--	--	--
25-44	639	100	--	--	--	--	276	43	87	14	--	--	--	--	--	--	--	--
45-64	238	100	--	--	--	--	115	48	--	--	--	--	--	--	--	--	--	--
65+	120	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 11 :

Number of accidents with injuries by type of injury, sex and type of accident, Canada, 1987

Sex and type of accident	Total accidents with injuries		Type of injury															
			Broken or fractured bone(s)		Burn or scald		Dislocation, sprain, strain or bruise		Cut or scrape		Poisoning by substance or liquid		Other		More than one injury		Not stated	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands																	
Both sexes																		
All incidents	4,044	100	464	11	134	3	1,728	43	700	17	192	5	404	10	398	10	--	--
Motor vehicle/traffic	707	100	--	--	--	--	303	43	--	--	--	--	--	--	176	25	--	--
Work related	1,034	100	102	10	--	--	401	39	228	22	--	--	141	14	--	--	--	--
Sports related	1,181	100	165	14	--	--	674	57	127	11	--	--	125	11	--	--	--	--
Home and surroundings	662	100	--	--	--	--	201	30	188	28	--	--	--	--	--	--	--	--
Unclassified	461	100	--	--	--	--	149	32	89	19	--	--	--	--	--	--	--	--
Males																		
All incidents	2,402	100	271	11	--	--	1,003	42	452	19	98	4	278	12	212	9	--	--
Motor vehicle/traffic	448	100	--	--	--	--	194	43	--	--	--	--	--	--	109	24	--	--
Work related	742	100	--	--	--	--	269	36	182	25	--	--	117	16	--	--	--	--
Sports related	766	100	98	13	--	--	415	54	114	15	--	--	87	11	--	--	--	--
Home and surroundings	240	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Unclassified	206	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Females																		
All incidents	1,642	100	193	12	--	--	725	44	248	15	94	6	126	8	186	11	--	--
Motor vehicle/traffic	259	100	--	--	--	--	110	42	--	--	--	--	--	--	--	--	--	--
Work related	292	100	--	--	--	--	132	45	--	--	--	--	--	--	--	--	--	--
Sports related	415	100	--	--	--	--	259	63	--	--	--	--	--	--	--	--	--	--
Home and surroundings	421	100	--	--	--	--	127	30	124	29	--	--	--	--	--	--	--	--
Unclassified	255	100	--	--	--	--	97	38	--	--	--	--	--	--	--	--	--	--

TABLE 12 :
Number of accidents with injuries by region of body injured, sex and type of accident, Canada, 1987

Sex and type of accident	Total accidents with injuries		Region of body injured															
			Eyes		Head or neck (excluding eyes)		Arms or hands		Legs or feet		Back or spine		Trunk		More than one region		Not stated	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands																	
Both sexes																		
All incidents	4,044	100	96	2	362	9	997	25	1,239	31	503	12	413	10	412	10	--	--
Motor vehicle/traffic	707	100	--	--	135	19	--	--	115	16	--	--	--	--	224	32	--	--
Work related	1,034	100	--	--	--	--	385	37	199	19	196	19	84	8	--	--	--	--
Sports related	1,181	100	--	--	98	8	229	19	597	51	94	8	86	7	--	--	--	--
Home and surroundings	662	100	--	--	--	--	208	31	181	27	96	14	90	14	--	--	--	--
Unclassified	461	100	--	--	--	--	98	21	146	32	--	--	87	19	--	--	--	--
Males																		
All incidents	2,402	100	89	4	225	9	597	25	684	28	292	12	266	11	238	10	--	--
Motor vehicle/traffic	448	100	--	--	88	20	--	--	--	--	--	--	--	--	136	30	--	--
Work related	742	100	--	--	--	--	264	36	161	22	134	18	--	--	--	--	--	--
Sports related	766	100	--	--	--	--	151	20	341	45	--	--	--	--	--	--	--	--
Home and surroundings	240	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Unclassified	206	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Females																		
All incidents	1,642	100	--	--	137	8	400	24	555	34	211	13	148	9	173	11	--	--
Motor vehicle/traffic	259	100	--	--	--	--	--	--	--	--	--	--	--	--	89	34	--	--
Work related	292	100	--	--	--	--	121	41	--	--	--	--	--	--	--	--	--	--
Sports related	415	100	--	--	--	--	--	--	256	62	--	--	--	--	--	--	--	--
Home and surroundings	421	100	--	--	--	--	140	33	125	30	--	--	--	--	--	--	--	--
Unclassified	255	100	--	--	--	--	--	--	91	35	--	--	--	--	--	--	--	--

TABLE 13 :
Number of accidents by attribution of cause, sex and type of accident, Canada, 1987

Sex and type of accident	Total - attribution of cause		Carelessness or unsafe activity										Could not be predicted or avoided		Not stated	
			Total		Employer's		Own self		Someone else's		Not stated					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No. in thousands															
Both sexes																
All incidents	5,127	100	2,680	52	113	2	1,609	31	945	18	--	--	2,391	47	--	--
Motor vehicle/traffic	1,697	100	1,185	70	--	--	490	29	672	40	--	--	510	30	--	--
Work related	1,052	100	420	40	83	8	274	26	--	--	--	--	628	60	--	--
Sports related	1,188	100	428	36	--	--	335	28	88	7	--	--	758	64	--	--
Home and surroundings	670	100	370	55	--	--	318	47	--	--	--	--	301	45	--	--
Unclassified	520	100	278	53	--	--	192	37	--	--	--	--	194	37	--	--
Males																
All incidents	3,062	100	1,542	50	--	--	969	32	491	16	--	--	1,495	49	--	--
Motor vehicle/traffic	1,057	100	731	69	--	--	342	32	373	35	--	--	323	31	--	--
Work related	760	100	301	40	--	--	217	29	--	--	--	--	455	60	--	--
Sports related	773	100	215	28	--	--	175	23	--	--	--	--	558	72	--	--
Home and surroundings	243	100	152	63	--	--	131	54	--	--	--	--	91	37	--	--
Unclassified	230	100	143	62	--	--	103	45	--	--	--	--	--	--	--	--
Females																
All incidents	2,064	100	1,138	55	--	--	640	31	454	22	--	--	896	43	--	--
Motor vehicle/traffic	641	100	454	71	--	--	147	23	300	47	--	--	187	29	--	--
Work related	292	100	118	41	--	--	--	--	--	--	--	--	173	59	--	--
Sports related	415	100	213	51	--	--	161	39	--	--	--	--	200	48	--	--
Home and surroundings	428	100	218	51	--	--	187	44	--	--	--	--	210	49	--	--
Unclassified	290	100	135	47	--	--	89	31	--	--	--	--	126	43	--	--

APPENDIX II

Cycle Three Questionnaires

APPENDIX II. CYCLE THREE QUESTIONNAIRES

Content and Questionnaires

Four questionnaires were used to collect Cycle 3 information:

QUESTIONNAIRE	AGE GROUP	TITLE
GSS 3-1	All age groups	Selection Control form
GSS 3-2	Age 15 and over	Personal Risk Screening Questionnaire
GSS 3-3	Age 15 and over	Accident Report
GSS 3-4	Age 15 and over	Crime Incident Report

The GSS 3-1 was completed for each telephone number selected in the sample. It lists all household members, collecting basic demographic information, specifically age, sex, marital status and relation to head of family. A respondent, 15 years of age or older was then randomly selected and a GSS 3-2 was completed for this person. The GSS 3-2 collected the following types of information: the respondent's attitudes to various components of the justice system, awareness of victim services and perception of risk with regard to accidents and crime incidents (section A); basic background information on the respondent (section B); information on the kind and number of times the respondent had been involved in an accident (section C) or a crime incident during 1987 (section D). Each time an accident or crime incident was reported on the GSS 3-2 questionnaire, an Accident Report (GSS 3-3) or a Crime Incident Report (GSS 3-4) was completed.

General social survey Selection control form

GSS 3-1

Confidential when completed

1: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	2: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
3: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	4: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
5: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	

TELEPHONE NUMBER LABEL

RECORD OF CALLS									
10	11 Date		12 Start		13 Finish		14 Result	15 Interviewer's Name	16 Comments
	Day	Month	Hour	Min.	Hour	Min.			
01									
02									
03									
04									
05									
06									
07									
08									
09									
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24									
25									

17. CALL COVERAGE BY TIME OF DAY AND DAY OF WEEK <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th>Time Period</th><th>Mon.</th><th>Tues.</th><th>Wed.</th><th>Thur.</th><th>Fri.</th><th>Sat.</th></tr> <tr> <td>09:00 - 12:00</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>12:01 - 16:00</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>16:01 - 19:00</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>19:01 - 21:00</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Time Period	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	09:00 - 12:00							12:01 - 16:00							16:01 - 19:00							19:01 - 21:00							18. FORMS CONTROL <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th>Form</th><th>Number of forms</th></tr> <tr> <td>GSS 3-1</td><td><input style="width: 20px;" type="text"/></td></tr> <tr> <td>GSS 3-2</td><td><input style="width: 20px;" type="text"/></td></tr> <tr> <td>GSS 3-3</td><td><input style="width: 20px;" type="text"/></td></tr> <tr> <td>GSS 3-4</td><td><input style="width: 20px;" type="text"/></td></tr> </table>	Form	Number of forms	GSS 3-1	<input style="width: 20px;" type="text"/>	GSS 3-2	<input style="width: 20px;" type="text"/>	GSS 3-3	<input style="width: 20px;" type="text"/>	GSS 3-4	<input style="width: 20px;" type="text"/>	19. Interviewer Number <input style="width: 100px;" type="text"/> 20. Final status <input style="width: 30px;" type="text"/>
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GSS 3-4	<input style="width: 20px;" type="text"/>																																														

<p>30. Hello, I'm from Statistics Canada. We are conducting a survey in your area and throughout Canada on accidents and crime and their impact on Canadians.</p>				<p>34. How many persons live or stay at this address and use this number as a home phone number?</p> <p>Less than 15 <input type="radio"/></p> <p>15 or more <input type="radio"/> → <i>Make appointment.</i></p>			
<p>31. I'd like to make sure that I've dialed the right number. Is this (read number)?</p> <p>Yes <input type="radio"/></p> <p>No <input type="radio"/> → <i>Dial again, if still wrong, END</i></p>				<p>35. In this survey all information we collect will be kept strictly confidential as guaranteed by the Statistics Act. While your participation is voluntary, it is essential if the survey results are to be accurate.</p>			
<p>32. Is this the number for a business, an institution or a private home?</p> <p>Private home <input type="radio"/> } → <i>Go to 35</i></p> <p>Both home and business <input type="radio"/> }</p> <p>Business, institution or other non-residence <input type="radio"/></p>				<p>36. I need to select one person from your household for an interview. Starting with the oldest, what is the name and age of each person living or staying there who has no usual place of residence elsewhere?</p> <p>(Enter names and ages in items 42 and 44)</p>			
<p>33. Does anyone use this telephone number as a home phone number?</p> <p>Yes <input type="radio"/></p> <p>No <input type="radio"/> → <i>Thank respondent and END</i></p>							
<p>37. INTERVIEWER:</p> <ul style="list-style-type: none"> • Enter answers for items 45 through 48 for each person recorded in item 42. Refer to Interviewer Reference Card for instructions and codes. • Then go to item 60. 							

Pg	Ln	42. Names of Household Members	43. Sel #	44. Age	45. Sex	46. What is's marital status?	47. Family Identifier	48. What is's relationship to ... (Head of Family)?
	1	Given name _____						
		Surname _____						
	2	Given name _____						
		Surname _____						
	3	Given name _____						
		Surname _____						
	4	Given name _____						
		Surname _____						
	5	Given name _____						
		Surname _____						
	6	Given name _____						
		Surname _____						
	7	Given name _____						
		Surname _____						
	8	Given name _____						
		Surname _____						

60. **INTERVIEWER:** Enter Page-Line no. of person giving the above information. →

61. Are there any persons away from this household attending school, visiting, travelling or in the hospital who USUALLY live there?

Yes ☐ → *Enter names and complete items 44 through 48*

No ☐

62. Does anyone else live there, such as other relatives, roomers, boarders or employees?

Yes ☐ → *Enter names and complete items 44 through 48*

No ☐

63. Now I am going to randomly select the person to interview. This will just take a second.

<p>64. INTERVIEWER:</p> <ul style="list-style-type: none"> • In item 43 number the persons 15 years of age and over in order from oldest to youngest. • Enter number of eligible household members 1 • Determine the selected person by referring to the Selection Grid. • In Item 43 circle the selected person number and enter Page-Line no. 2 	<div style="border: 1px solid black; height: 150px; margin: 10px; text-align: center; line-height: 150px; font-size: 24px;">SELECTION GRID LABEL</div> <p>A = Eligible household members B = Selection number</p>
<p>65. The person I am to interview is (read name) ... (Is he/she there?)</p> <p>Yes <input type="radio"/> → <i>Go to form GSS 3-2</i></p> <p>No <input type="radio"/> → <i>Set up appointment and enter details in item 16.</i></p>	



- - Telephone number

Label Identification Number

Page-Line No.

1 Type

GSS 3 - 2

Confidential when completed

GENERAL SOCIAL SURVEY

PERSONAL RISK

SCREENING QUESTIONNAIRE

AGES 15 YEARS AND OVER

SECTION A																												
<p>A1. INTERVIEWER: Repeat the introduction below if selected respondent is different from household respondent.</p> <p style="margin-left: 40px;">Hello, I'm from Statistics Canada. We are conducting a survey in your area and throughout Canada on accidents and crime and their impact on Canadians.</p> <p style="margin-left: 40px;">All the information you provide will be kept strictly confidential. While your participation is voluntary, it is essential if the survey results are to be accurate.</p>																												
<p>A2. These first questions ask about your opinions on crime and accidents and about ways in which people protect themselves and their property.</p>																												
<p>A3. Compared to other areas in Canada, do you think your neighbourhood has a higher amount of crime, about the same or a lower amount of crime?</p> <p style="margin-left: 40px;">Higher 1 <input type="radio"/></p> <p style="margin-left: 40px;">About the same 2 <input type="radio"/></p> <p style="margin-left: 40px;">Lower 3 <input type="radio"/></p> <p style="margin-left: 40px;">Don't know 4 <input type="radio"/></p>																												
<p>A4. During 1987, do you think that crime in your neighbourhood has increased, decreased, or remained about the same?</p> <p style="margin-left: 40px;">Increased 5 <input type="radio"/></p> <p style="margin-left: 40px;">Decreased 6 <input type="radio"/></p> <p style="margin-left: 40px;">Same 7 <input type="radio"/></p> <p style="margin-left: 40px;">Don't know 8 <input type="radio"/></p>																												
<p>A5. Which of the following types of crime is of most concern to you? Is it... (Accept one response only)</p> <p style="margin-left: 40px;">Attack or threat of attack? 1 <input type="radio"/></p> <p style="margin-left: 40px;">Theft of household or personal belongings? 2 <input type="radio"/></p> <p style="margin-left: 40px;">Deliberate damage to household or personal belongings? 3 <input type="radio"/></p> <p style="margin-left: 40px;">Something else? 4 <input type="radio"/></p>																												
<p>A6. How safe do you feel or would you feel walking alone in your neighbourhood...</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>...during the day?</p> <p>Very safe 01 <input type="radio"/></p> <p>Reasonably safe 02 <input type="radio"/></p> <p>Somewhat unsafe 03 <input type="radio"/></p> <p>Very unsafe 04 <input type="radio"/></p> <p>Don't know 05 <input type="radio"/></p> </td> <td style="width: 50%; vertical-align: top;"> <p>How about after dark?</p> <p>Very safe 06 <input type="radio"/></p> <p>Reasonably safe 07 <input type="radio"/></p> <p>Somewhat unsafe 08 <input type="radio"/></p> <p>Very unsafe 09 <input type="radio"/></p> <p>Don't know 10 <input type="radio"/></p> </td> </tr> </table>				<p>...during the day?</p> <p>Very safe 01 <input type="radio"/></p> <p>Reasonably safe 02 <input type="radio"/></p> <p>Somewhat unsafe 03 <input type="radio"/></p> <p>Very unsafe 04 <input type="radio"/></p> <p>Don't know 05 <input type="radio"/></p>	<p>How about after dark?</p> <p>Very safe 06 <input type="radio"/></p> <p>Reasonably safe 07 <input type="radio"/></p> <p>Somewhat unsafe 08 <input type="radio"/></p> <p>Very unsafe 09 <input type="radio"/></p> <p>Don't know 10 <input type="radio"/></p>																							
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<p>A7. Do you think your local police force does a good job, an average job or a poor job:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"></td> <td style="width: 12.5%; text-align: center;">Good job</td> <td style="width: 12.5%; text-align: center;">Average job</td> <td style="width: 12.5%; text-align: center;">Poor job</td> <td style="width: 12.5%; text-align: center;">Don't know</td> </tr> <tr> <td>a) Of enforcing the laws?</td> <td style="text-align: center;">01 <input type="radio"/></td> <td style="text-align: center;">02 <input type="radio"/></td> <td style="text-align: center;">03 <input type="radio"/></td> <td style="text-align: center;">04 <input type="radio"/></td> </tr> <tr> <td>b) Of promptly responding to calls?</td> <td style="text-align: center;">05 <input type="radio"/></td> <td style="text-align: center;">06 <input type="radio"/></td> <td style="text-align: center;">07 <input type="radio"/></td> <td style="text-align: center;">08 <input type="radio"/></td> </tr> <tr> <td>c) Of being approachable and easy to talk to?</td> <td style="text-align: center;">09 <input type="radio"/></td> <td style="text-align: center;">10 <input type="radio"/></td> <td style="text-align: center;">11 <input type="radio"/></td> <td style="text-align: center;">12 <input type="radio"/></td> </tr> <tr> <td>d) Of supplying information to the public on ways to reduce crime?</td> <td style="text-align: center;">13 <input type="radio"/></td> <td style="text-align: center;">14 <input type="radio"/></td> <td style="text-align: center;">15 <input type="radio"/></td> <td style="text-align: center;">16 <input type="radio"/></td> </tr> </table>					Good job	Average job	Poor job	Don't know	a) Of enforcing the laws?	01 <input type="radio"/>	02 <input type="radio"/>	03 <input type="radio"/>	04 <input type="radio"/>	b) Of promptly responding to calls?	05 <input type="radio"/>	06 <input type="radio"/>	07 <input type="radio"/>	08 <input type="radio"/>	c) Of being approachable and easy to talk to?	09 <input type="radio"/>	10 <input type="radio"/>	11 <input type="radio"/>	12 <input type="radio"/>	d) Of supplying information to the public on ways to reduce crime?	13 <input type="radio"/>	14 <input type="radio"/>	15 <input type="radio"/>	16 <input type="radio"/>
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<p>A8. Now I would like to ask you a similar question about the criminal courts. Are they doing a good job, an average job or a poor job:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"></td> <td style="width: 12.5%; text-align: center;">Good job</td> <td style="width: 12.5%; text-align: center;">Average job</td> <td style="width: 12.5%; text-align: center;">Poor job</td> <td style="width: 12.5%; text-align: center;">Don't know</td> </tr> <tr> <td>a) In providing justice quickly?</td> <td style="text-align: center;">17 <input type="radio"/></td> <td style="text-align: center;">18 <input type="radio"/></td> <td style="text-align: center;">19 <input type="radio"/></td> <td style="text-align: center;">20 <input type="radio"/></td> </tr> <tr> <td>b) In helping the victim?</td> <td style="text-align: center;">21 <input type="radio"/></td> <td style="text-align: center;">22 <input type="radio"/></td> <td style="text-align: center;">23 <input type="radio"/></td> <td style="text-align: center;">24 <input type="radio"/></td> </tr> <tr> <td>c) In determining whether the accused, or the person charged is guilty or not?</td> <td style="text-align: center;">25 <input type="radio"/></td> <td style="text-align: center;">26 <input type="radio"/></td> <td style="text-align: center;">27 <input type="radio"/></td> <td style="text-align: center;">28 <input type="radio"/></td> </tr> <tr> <td>d) In protecting the rights of the accused?</td> <td style="text-align: center;">29 <input type="radio"/></td> <td style="text-align: center;">30 <input type="radio"/></td> <td style="text-align: center;">31 <input type="radio"/></td> <td style="text-align: center;">32 <input type="radio"/></td> </tr> </table>					Good job	Average job	Poor job	Don't know	a) In providing justice quickly?	17 <input type="radio"/>	18 <input type="radio"/>	19 <input type="radio"/>	20 <input type="radio"/>	b) In helping the victim?	21 <input type="radio"/>	22 <input type="radio"/>	23 <input type="radio"/>	24 <input type="radio"/>	c) In determining whether the accused, or the person charged is guilty or not?	25 <input type="radio"/>	26 <input type="radio"/>	27 <input type="radio"/>	28 <input type="radio"/>	d) In protecting the rights of the accused?	29 <input type="radio"/>	30 <input type="radio"/>	31 <input type="radio"/>	32 <input type="radio"/>
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<p>A9. In general, would you say that sentences handed down by the courts are too severe, about right or not severe enough?</p> <p style="margin-left: 40px;">Too severe 1 <input type="radio"/></p> <p style="margin-left: 40px;">About right 2 <input type="radio"/></p> <p style="margin-left: 40px;">Not severe enough 3 <input type="radio"/></p> <p style="margin-left: 40px;">Don't know 4 <input type="radio"/></p>																												
<p>A10. Have you heard of any of the following ways that victims of crime may obtain assistance or compensation?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;"></td> <td style="width: 20%; text-align: center;">Yes</td> <td style="width: 20%; text-align: center;">No</td> </tr> <tr> <td>a) Payment ordered by a judge as part of an offender's sentence?</td> <td style="text-align: center;">01 <input type="radio"/></td> <td style="text-align: center;">02 <input type="radio"/></td> </tr> <tr> <td>b) Various services providing assistance to the victim, such as shelters for battered women, sexual assault centres, crisis lines, community police programmes and court assistance programmes?</td> <td style="text-align: center;">03 <input type="radio"/></td> <td style="text-align: center;">04 <input type="radio"/></td> </tr> <tr> <td>c) Victim-offender reconciliation programmes? These are programmes intended to bring the victim and offender together to resolve a dispute and repay the victim</td> <td style="text-align: center;">05 <input type="radio"/></td> <td style="text-align: center;">06 <input type="radio"/></td> </tr> <tr> <td>d) Payment from a Criminal Injuries Compensation Board?</td> <td style="text-align: center;">07 <input type="radio"/></td> <td style="text-align: center;">08 <input type="radio"/></td> </tr> <tr> <td>e) A civil court awards damages to the victim?</td> <td style="text-align: center;">09 <input type="radio"/></td> <td style="text-align: center;">10 <input type="radio"/></td> </tr> <tr> <td>f) An insurance company pays for the victim's loss or injury?</td> <td style="text-align: center;">11 <input type="radio"/></td> <td style="text-align: center;">12 <input type="radio"/></td> </tr> </table>					Yes	No	a) Payment ordered by a judge as part of an offender's sentence?	01 <input type="radio"/>	02 <input type="radio"/>	b) Various services providing assistance to the victim, such as shelters for battered women, sexual assault centres, crisis lines, community police programmes and court assistance programmes?	03 <input type="radio"/>	04 <input type="radio"/>	c) Victim-offender reconciliation programmes? These are programmes intended to bring the victim and offender together to resolve a dispute and repay the victim	05 <input type="radio"/>	06 <input type="radio"/>	d) Payment from a Criminal Injuries Compensation Board?	07 <input type="radio"/>	08 <input type="radio"/>	e) A civil court awards damages to the victim?	09 <input type="radio"/>	10 <input type="radio"/>	f) An insurance company pays for the victim's loss or injury?	11 <input type="radio"/>	12 <input type="radio"/>				
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<p>A11. During 1987, did you have any contact with a police officer who was on duty?</p> <p style="margin-left: 40px;">Yes 1 <input type="radio"/></p> <p style="margin-left: 40px;">No 2 <input type="radio"/> → Go to A14</p>																												
<p>A12. Were any of these contacts as a result of a crime?</p> <p style="margin-left: 40px;">Yes 3 <input type="radio"/></p> <p style="margin-left: 40px;">No 4 <input type="radio"/> → Go to A14</p>																												
<p>A13. Who were the victims of this crime? (Mark all that apply)</p> <p style="margin-left: 40px;">Yourself? 1 <input type="radio"/></p> <p style="margin-left: 40px;">Someone close to you? (Friends, relatives) 2 <input type="radio"/></p> <p style="margin-left: 40px;">Someone else? 3 <input type="radio"/></p> <p style="margin-left: 40px;">None of the above 4 <input type="radio"/></p>																												
<p>A14. During 1987, did you have any contact with a lawyer?</p> <p style="margin-left: 40px;">Yes 5 <input type="radio"/></p> <p style="margin-left: 40px;">No 6 <input type="radio"/> → Go to A17</p>																												
<p>A15. Were any of these contacts as a result of a crime?</p> <p style="margin-left: 40px;">Yes 7 <input type="radio"/></p> <p style="margin-left: 40px;">No 8 <input type="radio"/> → Go to A17</p>																												
<p>A16. Who were the victims of this crime? (Mark all that apply)</p> <p style="margin-left: 40px;">Yourself? 1 <input type="radio"/></p> <p style="margin-left: 40px;">Someone close to you? (Friends, relatives) 2 <input type="radio"/></p> <p style="margin-left: 40px;">Someone else? 3 <input type="radio"/></p> <p style="margin-left: 40px;">None of the above 4 <input type="radio"/></p>																												
<p>A17. During 1987, did you have any contact with the courts?</p> <p style="margin-left: 40px;">Yes 3 <input type="radio"/></p> <p style="margin-left: 40px;">No 4 <input type="radio"/> → Go to A20</p>																												
<p>A18. Were any of these contacts as a result of a crime?</p> <p style="margin-left: 40px;">Yes 5 <input type="radio"/></p> <p style="margin-left: 40px;">No 6 <input type="radio"/> → Go to A20</p>																												

<p>A19. Who were the victims of this crime? (Mark all that apply)</p> <p> Yourself? 1 <input type="radio"/> Someone close to you?(Friends, relatives) 2 <input type="radio"/> Someone else? 3 <input type="radio"/> None of the above 4 <input type="radio"/> </p>	<p>A26. During 1987, did you take a drink of wine, beer, liquor or any other alcoholic beverage?</p> <p> Yes 1 <input type="radio"/> No 2 <input type="radio"/> → Go to A28 </p>																																																			
<p>A20. During 1987, did you witness a crime being committed against someone other than yourself?</p> <p> Yes 5 <input type="radio"/> No 6 <input type="radio"/> → Go to A23 </p>	<p>A27. How often did you take a drink? Was it ...</p> <p> At least once a week 3 <input type="radio"/> → Considering a drink to be one bottle of beer, one small glass of wine or 1 1/2 oz of liquor, how many drinks do you have in a typical week? </p> <div style="text-align: right; margin-top: 10px;"> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> drinks </div> <p> One or more times a month 4 <input type="radio"/> Less often than once a month 5 <input type="radio"/> Don't know 6 <input type="radio"/> </p>																																																			
<p>A21. Thinking about the most recent, did the police find out about the incident in any way?</p> <p> Yes 7 <input type="radio"/> No 8 <input type="radio"/> → Go to A23 </p>																																																				
<p>A22. How did they learn about it? Was it from you or someone else?</p> <p> Respondent 1 <input type="radio"/> Someone else 2 <input type="radio"/> </p>																																																				
<p>A23. During 1987, did you do any of the following things to protect yourself or your property from crime? Have you ...</p> <table style="width: 100%; border: none;"> <thead> <tr> <th></th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> </tr> </thead> <tbody> <tr> <td>a) Changed daily routine, activities, or avoided certain places?</td> <td style="text-align: center;">2 <input type="radio"/></td> <td style="text-align: center;">3 <input type="radio"/></td> </tr> <tr> <td>b) Changed phone number?</td> <td style="text-align: center;">4 <input type="radio"/></td> <td style="text-align: center;">5 <input type="radio"/></td> </tr> <tr> <td>c) Installed new locks, bars on windows or burglar alarms?</td> <td style="text-align: center;">6 <input type="radio"/></td> <td style="text-align: center;">7 <input type="radio"/></td> </tr> <tr> <td>d) Taken a self defence course?</td> <td style="text-align: center;">8 <input type="radio"/></td> <td style="text-align: center;">9 <input type="radio"/></td> </tr> </tbody> </table>		Yes	No	a) Changed daily routine, activities, or avoided certain places?	2 <input type="radio"/>	3 <input type="radio"/>	b) Changed phone number?	4 <input type="radio"/>	5 <input type="radio"/>	c) Installed new locks, bars on windows or burglar alarms?	6 <input type="radio"/>	7 <input type="radio"/>	d) Taken a self defence course?	8 <input type="radio"/>	9 <input type="radio"/>	<p>A28. We would like you to rate on a scale of zero to ten the chances of the following events happening to you in the future. A zero means you think it will never happen and a ten means that you think the event will almost certainly happen to you. Rate the chances of:</p> <div style="text-align: center; margin-top: 10px;"> <p>Scale</p> <div style="display: flex; justify-content: space-between; width: 100%;"> Will never happen Will happen </div> <div style="text-align: center;"> <div style="border-left: 1px solid black; border-right: 1px solid black; height: 20px; width: 100%;"></div> <div style="display: flex; justify-content: space-between; width: 100%; font-size: small;"> 012345678910 </div> </div> </div> <table style="width: 100%; border: none; margin-top: 10px;"> <tbody> <tr> <td>a) An airplane accident</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>b) A car or motorcycle accident</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>c) An accident at work requiring medical attention</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>d) Deliberate damage to household or personal belongings</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>e) Pollution of the environment</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>f) Theft of household or personal belongings</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>g) An accident at home requiring medical attention</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>h) Assault or threat of assault</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> <tr> <td>i) A road accident involving you as a pedestrian or on a bicycle</td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> <td style="border: 1px solid black; width: 40px; height: 20px;"></td> </tr> </tbody> </table>	a) An airplane accident				b) A car or motorcycle accident				c) An accident at work requiring medical attention				d) Deliberate damage to household or personal belongings				e) Pollution of the environment				f) Theft of household or personal belongings				g) An accident at home requiring medical attention				h) Assault or threat of assault				i) A road accident involving you as a pedestrian or on a bicycle			
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<p>A25. On average, how many times a month do you go out during the evening to do the following activities ...</p> <table style="width: 100%; border: none;"> <thead> <tr> <th></th> <th style="text-align: center;">No. of times a month</th> <th></th> </tr> </thead> <tbody> <tr> <td>a) Work nights, attend night classes, go to meetings or do volunteer work?</td> <td style="text-align: center;">1 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> <tr> <td>b) Go to restaurants or bars?</td> <td style="text-align: center;">2 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> <tr> <td>c) Go to movies, theatres or play bingo?</td> <td style="text-align: center;">3 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> <tr> <td>d) To go out for sports, exercise or recreational activities?</td> <td style="text-align: center;">4 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> <tr> <td>e) Shop?</td> <td style="text-align: center;">5 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> <tr> <td>f) Visit relatives or friends in their own homes?</td> <td style="text-align: center;">6 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> <tr> <td>g) Other evening activities not already mentioned?</td> <td style="text-align: center;">7 <input type="text"/> <input type="text"/> <input type="text"/> or None</td> <td style="text-align: center;">00 <input type="radio"/></td> </tr> </tbody> </table>		No. of times a month		a) Work nights, attend night classes, go to meetings or do volunteer work?	1 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>	b) Go to restaurants or bars?	2 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>	c) Go to movies, theatres or play bingo?	3 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>	d) To go out for sports, exercise or recreational activities?	4 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>	e) Shop?	5 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>	f) Visit relatives or friends in their own homes?	6 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>	g) Other evening activities not already mentioned?	7 <input type="text"/> <input type="text"/> <input type="text"/> or None	00 <input type="radio"/>																												
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SECTION B																													
<p>B1 This survey, the General Social Survey, needs some background information to monitor changes in Canadian society. For this reason I'd like to ask you the following questions.</p>	<p>B11. In what year did you first immigrate to Canada?</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p>Canadian citizen by birth ... ³○</p>																												
<p>B2 In what type of dwelling are you now living? Is it a ...</p> <p>Single detached house? ³○</p> <p>Semi-detached or double (side-by-side)? ⁴○</p> <p>Garden house, town-house or row house? ⁵○</p> <p>Duplex (one above the other)? ⁶○</p> <p>Low-rise apartment (less than 5 stories)? ⁷○</p> <p>High-rise apartment (5 or more stories)? ⁸○</p> <p>Other ⁹○</p> <p style="text-align: right;">↓ (Specify)</p> <div style="border: 1px solid black; width: 100%; height: 40px; margin-top: 10px;"></div>	<p>B12. What is your date of birth?</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> </div> <p style="text-align: center; font-size: small;">Day Month Year</p>																												
<p>B3. What are the first three characters of your postal code?</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p>Don't know ⁸⁸⁸○</p>	<p>B13. What language did you first speak in childhood? (Accept multiple response only if languages were used equally)</p> <p style="text-align: right; font-size: small;">Do you still understand that/those language(s)?</p> <table style="width: 100%; font-size: small;"> <tr> <td>English</td> <td>¹○</td> <td></td> <td></td> </tr> <tr> <td>French</td> <td>²○</td> <td>→ Yes ⁰³○</td> <td>No ⁰⁴○</td> </tr> <tr> <td>Italian</td> <td>³○</td> <td>→ Yes ⁰⁵○</td> <td>No ⁰⁶○</td> </tr> <tr> <td>German</td> <td>⁴○</td> <td>→ Yes ⁰⁷○</td> <td>No ⁰⁸○</td> </tr> <tr> <td>Ukrainian</td> <td>⁵○</td> <td>→ Yes ⁰⁹○</td> <td>No ¹⁰○</td> </tr> <tr> <td>Other</td> <td>⁶○</td> <td>→ Yes ¹¹○</td> <td>No ¹²○</td> </tr> </table> <p style="text-align: right;">↓ (Specify)</p> <div style="border: 1px solid black; width: 100%; height: 40px; margin-top: 10px;"></div>	English	¹ ○			French	² ○	→ Yes ⁰³ ○	No ⁰⁴ ○	Italian	³ ○	→ Yes ⁰⁵ ○	No ⁰⁶ ○	German	⁴ ○	→ Yes ⁰⁷ ○	No ⁰⁸ ○	Ukrainian	⁵ ○	→ Yes ⁰⁹ ○	No ¹⁰ ○	Other	⁶ ○	→ Yes ¹¹ ○	No ¹² ○				
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<p>B4. Is this dwelling owned or rented by a member of this household?</p> <p>Owned ¹○</p> <p>Rented ²○</p>	<p>B14. What language do you speak most often at home? (Accept multiple response only if languages are spoken equally)</p> <table style="width: 100%; font-size: small;"> <tr> <td>English</td> <td>¹○</td> </tr> <tr> <td>French</td> <td>²○</td> </tr> <tr> <td>Italian</td> <td>³○</td> </tr> <tr> <td>Chinese</td> <td>⁴○</td> </tr> <tr> <td>German</td> <td>⁵○</td> </tr> <tr> <td>Other</td> <td>⁶○</td> </tr> </table> <p style="text-align: right;">↓ (Specify)</p> <div style="border: 1px solid black; width: 100%; height: 40px; margin-top: 10px;"></div>	English	¹ ○	French	² ○	Italian	³ ○	Chinese	⁴ ○	German	⁵ ○	Other	⁶ ○																
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<p>B5. How many telephones, including extensions, are there in your dwelling?</p> <p>One ³○ → Go to B10</p> <p>Two or more ⁴○</p>	<p>B15. How many years of elementary or high school education have you successfully completed?</p> <p>No schooling ⁰¹○ → Go to B19</p> <table style="width: 100%; font-size: small;"> <tr> <td>One to five years</td> <td>⁰²○</td> <td rowspan="5" style="vertical-align: middle; font-size: 2em;">}</td> <td rowspan="5" style="vertical-align: middle;">Go to B17</td> </tr> <tr> <td>Six</td> <td>⁰³○</td> </tr> <tr> <td>Seven</td> <td>⁰⁴○</td> </tr> <tr> <td>Eight</td> <td>⁰⁵○</td> </tr> <tr> <td>Nine</td> <td>⁰⁶○</td> </tr> <tr> <td>Ten</td> <td>⁰⁷○</td> <td></td> <td></td> </tr> <tr> <td>Eleven</td> <td>⁰⁸○</td> <td></td> <td></td> </tr> <tr> <td>Twelve</td> <td>⁰⁹○</td> <td></td> <td></td> </tr> <tr> <td>Thirteen</td> <td>¹⁰○</td> <td></td> <td></td> </tr> </table>	One to five years	⁰² ○	}	Go to B17	Six	⁰³ ○	Seven	⁰⁴ ○	Eight	⁰⁵ ○	Nine	⁰⁶ ○	Ten	⁰⁷ ○			Eleven	⁰⁸ ○			Twelve	⁰⁹ ○			Thirteen	¹⁰ ○		
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<p>B6. Do all the telephones have the same number?</p> <p>Yes ⁵○ → Go to B10</p> <p>No ⁶○</p>	<p>B16. Have you graduated from high school?</p> <p>Yes ¹○</p> <p>No ²○</p>																												
<p>B7. How many different numbers are there?</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div>	<p>B17. Have you had any further schooling beyond elementary/high school?</p> <p>Yes ³○</p> <p>No ⁴○ → Go to B19</p>																												
<p>B8. Are any of these numbers for business use only?</p> <p>Yes ⁷○</p> <p>No ⁸○ → Go to B10</p>																													
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<p>B10. In what country were you born?</p> <p>Canada ¹○ → In which province or territory?</p> <table style="width: 100%; font-size: small;"> <tr><td>Newfoundland</td><td>⁰¹○</td></tr> <tr><td>Prince Edward Island</td><td>⁰²○</td></tr> <tr><td>Nova Scotia</td><td>⁰³○</td></tr> <tr><td>New Brunswick</td><td>⁰⁴○</td></tr> <tr><td>Quebec</td><td>⁰⁵○</td></tr> <tr><td>Ontario</td><td>⁰⁶○</td></tr> <tr><td>Manitoba</td><td>⁰⁷○</td></tr> <tr><td>Saskatchewan</td><td>⁰⁸○</td></tr> <tr><td>Alberta</td><td>⁰⁹○</td></tr> <tr><td>British Columbia</td><td>¹⁰○</td></tr> <tr><td>Yukon Territory</td><td>¹¹○</td></tr> <tr><td>Northwest Territories</td><td>¹²○</td></tr> </table> <p style="text-align: right; font-size: small;">Go to B12</p> <p>Country outside Canada ²○</p> <p style="text-align: right;">↓ (Specify)</p> <div style="border: 1px solid black; width: 100%; height: 40px; margin-top: 10px;"></div> <p style="text-align: right; font-size: small;">Go to B11</p>	Newfoundland	⁰¹ ○	Prince Edward Island	⁰² ○	Nova Scotia	⁰³ ○	New Brunswick	⁰⁴ ○	Quebec	⁰⁵ ○	Ontario	⁰⁶ ○	Manitoba	⁰⁷ ○	Saskatchewan	⁰⁸ ○	Alberta	⁰⁹ ○	British Columbia	¹⁰ ○	Yukon Territory	¹¹ ○	Northwest Territories	¹² ○					
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<p>B18. What is the highest level you attained? (Accept one response only)</p> <p>Master's or earned doctorate 1 <input type="radio"/></p> <p>Bachelor or undergraduate degree or teacher's college 2 <input type="radio"/></p> <p>Diploma or certificate from community college, CEGEP or nursing school 3 <input type="radio"/></p> <p>Diploma or certificate from trade, technical or vocational school or business college 4 <input type="radio"/></p> <p>Some university 5 <input type="radio"/></p> <p>Some community college, CEGEP or nursing school 6 <input type="radio"/></p> <p>Some trade, technical, or vocational school or business college 7 <input type="radio"/></p> <p>Other 8 <input type="radio"/> (Specify)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>	<p>B22. Which of the following best describes your main activity during 1987? Were you mainly ... (Accept one response only)</p> <p>Working at a job or business? 1 <input type="radio"/> → Go to B24</p> <p>Looking for work? 2 <input type="radio"/></p> <p>A student? 3 <input type="radio"/></p> <p>Keeping house? 4 <input type="radio"/></p> <p>Retired? 5 <input type="radio"/></p> <p>Other 6 <input type="radio"/> (Specify)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>
<p>B19. What, if any, is your religion?</p> <p>No religion 01 <input type="radio"/> → Go to B21</p> <p>Roman Catholic 02 <input type="radio"/></p> <p>United Church 03 <input type="radio"/></p> <p>Anglican 04 <input type="radio"/></p> <p>Presbyterian 05 <input type="radio"/></p> <p>Lutheran 06 <input type="radio"/></p> <p>Baptist 07 <input type="radio"/></p> <p>Eastern Orthodox 08 <input type="radio"/></p> <p>Jewish 09 <input type="radio"/></p> <p>Other 10 <input type="radio"/> (Specify)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>	<p>B23. Did you have a job or were you self-employed at any time during 1987?</p> <p>Yes 7 <input type="radio"/></p> <p>No 8 <input type="radio"/> → Go to B34</p>
<p>B20. Other than on special occasions, such as weddings, funerals or baptisms, how often did you attend services or meetings connected with your religion in 1987?</p> <p>At least once a week 1 <input type="radio"/></p> <p>At least once a month 2 <input type="radio"/></p> <p>A few times a year 3 <input type="radio"/></p> <p>At least once a year 4 <input type="radio"/></p> <p>Less than once a year 5 <input type="radio"/></p> <p>Never 6 <input type="radio"/></p>	<p>B24. For how many weeks during 1987 did you do any work at a job or business? (Include vacation, illness, strikes, lock-outs and maternity leave.)</p> <p> weeks (Code number from 01 to 52)</p>
<p>B21. To which ethnic or cultural group do you or did your ancestors belong? (Accept multiple response)</p> <p>French 01 <input type="radio"/></p> <p>English 02 <input type="radio"/></p> <p>Irish 03 <input type="radio"/></p> <p>Scottish 04 <input type="radio"/></p> <p>German 05 <input type="radio"/></p> <p>Italian 06 <input type="radio"/></p> <p>Ukrainian 07 <input type="radio"/></p> <p>Other 08 <input type="radio"/> (Specify)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <p>Canadian (Probe) 09 <input type="radio"/></p> <p>Don't know 10 <input type="radio"/></p>	<p>B25. During those weeks, was the work mostly full-time or part-time?</p> <p>Full-time 1 <input type="radio"/></p> <p>Part-time 2 <input type="radio"/></p>
<p>B26. During those weeks were you mainly ...</p> <p>An employee working for someone else? 3 <input type="radio"/></p> <p>Self-employed? 4 <input type="radio"/> → Go to B29</p>	<p>B27. Which of the following best describes the work you did? Was it:</p> <p>Managerial 5 <input type="radio"/></p> <p>Supervisory 6 <input type="radio"/></p> <p>Neither 7 <input type="radio"/></p>
<p>B28. INTERVIEWER: Go to B31</p>	<p>B29. During those weeks, did you have any paid employees?</p> <p>Yes 8 <input type="radio"/></p> <p>No 9 <input type="radio"/> → Go to B31</p>
<p>B30. About how many employees did you have? (If range given, enter maximum)</p> <p> employees</p>	<p>B31. For whom did you work for the longest time during 1987? (Name of business, government department or agency or person.)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>

<p>B32. What kind of business, industry or service was this? (Give full description: e.g. paper box manufacturing, retail shoe store, municipal board of education.)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>	<p>B35. What is your best estimate of your total personal income in 1987 from all sources, including those just mentioned?</p> <p>Income ¹ <input type="radio"/> → \$ <div style="border-bottom: 1px solid black; width: 100px; display: inline-block;"></div>.00</p> <p>Loss ² <input type="radio"/> → \$ <div style="border-bottom: 1px solid black; width: 100px; display: inline-block;"></div>.00</p> <p>No income ³ <input type="radio"/></p> <p>Don't know ⁴ <input type="radio"/></p>															
<p>B33. What kind of work were you doing? (Give a full description: e.g. accounts clerk, dairy farmer, primary school teacher.)</p> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>	<p>B36. What is your best estimate of the total income of all household members from all sources in 1987? Was the total household income...</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Less than \$20,000? ⁰¹ <input type="radio"/></p> <p>Less than \$10,000? ⁰⁵ <input type="radio"/></p> <p>\$10,000 and more? ⁰⁶ <input type="radio"/></p> <p>\$20,000 and more? ⁰² <input type="radio"/></p> <p>No income ⁰³ <input type="radio"/></p> <p>Don't know ⁰⁴ <input type="radio"/></p> </div> <div style="width: 45%;"> <p>Less than \$5,000? ⁰⁹ <input type="radio"/></p> <p>\$5,000 and more? ¹⁰ <input type="radio"/></p> <p>Less than \$15,000? ¹¹ <input type="radio"/></p> <p>\$15,000 and more? ¹² <input type="radio"/></p> <p>Less than \$30,000? ¹³ <input type="radio"/></p> <p>\$30,000 and more? ¹⁴ <input type="radio"/></p> <p>Less than \$60,000? ¹⁵ <input type="radio"/></p> <p>\$60,000 and more? ¹⁶ <input type="radio"/></p> </div> </div>															
<p>B34. From which of the following sources did you receive income during 1987?</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> </tr> </thead> <tbody> <tr> <td>a) Income from wages, salary or self-employment?</td> <td style="text-align: center;">¹ <input type="radio"/></td> <td style="text-align: center;">² <input type="radio"/></td> </tr> <tr> <td>b) Income from government, such as Family Allowance, U.I.C., Social Assistance, Canada or Quebec Pension Plan or Old Age Security? . .</td> <td style="text-align: center;">³ <input type="radio"/></td> <td style="text-align: center;">⁴ <input type="radio"/></td> </tr> <tr> <td>c) Income from interest, dividends, investments or private pensions?</td> <td style="text-align: center;">⁵ <input type="radio"/></td> <td style="text-align: center;">⁶ <input type="radio"/></td> </tr> <tr> <td>d) Income from any other sources, such as alimony, scholarships, etc.?</td> <td style="text-align: center;">⁷ <input type="radio"/></td> <td style="text-align: center;">⁸ <input type="radio"/></td> </tr> </tbody> </table>		Yes	No	a) Income from wages, salary or self-employment?	¹ <input type="radio"/>	² <input type="radio"/>	b) Income from government, such as Family Allowance, U.I.C., Social Assistance, Canada or Quebec Pension Plan or Old Age Security? . .	³ <input type="radio"/>	⁴ <input type="radio"/>	c) Income from interest, dividends, investments or private pensions?	⁵ <input type="radio"/>	⁶ <input type="radio"/>	d) Income from any other sources, such as alimony, scholarships, etc.?	⁷ <input type="radio"/>	⁸ <input type="radio"/>	
	Yes	No														
a) Income from wages, salary or self-employment?	¹ <input type="radio"/>	² <input type="radio"/>														
b) Income from government, such as Family Allowance, U.I.C., Social Assistance, Canada or Quebec Pension Plan or Old Age Security? . .	³ <input type="radio"/>	⁴ <input type="radio"/>														
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d) Income from any other sources, such as alimony, scholarships, etc.?	⁷ <input type="radio"/>	⁸ <input type="radio"/>														

SECTION C

C1. The next questions ask about accidents which may have happened to you during 1987.

We are interested in accidents which either:

- DISRUPTED YOUR NORMAL ACTIVITIES FOR AT LEAST HALF A DAY;
OR
- RESULTED IN OUT OF POCKET EXPENSES OF \$200 OR MORE.

	Yes	How many in 1987?	No
C2 From January 1st to December 31st, 1987, did you have an accident:			
a) While in a car, van, truck or on a motorcycle?	Yes ⁰¹ <input type="radio"/>	→ <input type="text"/>	No ⁰² <input type="radio"/>
b) While on a recreational vehicle such as an All Terrain Vehicle (ATV), snowmobile, etc.?	Yes ⁰³ <input type="radio"/>	→ <input type="text"/>	No ⁰⁴ <input type="radio"/>
c) While a pedestrian or on a bicycle?	Yes ⁰⁵ <input type="radio"/>	→ <input type="text"/>	No ⁰⁶ <input type="radio"/>
C3 (Excluding those already mentioned,) did you have an accident while working at a job or business during 1987? (Mark "did not work in period" as "No".)	Yes ⁰⁷ <input type="radio"/>	→ <input type="text"/>	No ⁰⁸ <input type="radio"/>
C4 (Excluding those already mentioned,) did you have an accident while playing games or participating in sports during 1987?	Yes ⁰⁹ <input type="radio"/>	→ <input type="text"/>	No ¹⁰ <input type="radio"/>
C5 (Other than any accidents already mentioned,) during 1987 did you:			
a) Have a fall which resulted in an injury?	Yes ¹¹ <input type="radio"/>	→ <input type="text"/>	No ¹² <input type="radio"/>
b) Suffer burns, smoke inhalation or other fire-related accidents?	Yes ¹³ <input type="radio"/>	→ <input type="text"/>	No ¹⁴ <input type="radio"/>
c) Suffer from poisoning by any substances or liquids, including drugs?	Yes ¹⁵ <input type="radio"/>	→ <input type="text"/>	No ¹⁶ <input type="radio"/>
d) Cut yourself seriously with a knife, broken glass or other object?	Yes ¹⁷ <input type="radio"/>	→ <input type="text"/>	No ¹⁸ <input type="radio"/>
e) Have other accidents which involved an injury to you?	Yes ¹⁹ <input type="radio"/>	→ <input type="text"/>	No ²⁰ <input type="radio"/>
C6 During 1987 did you have any other type of accident?	Yes ²¹ <input type="radio"/>	→ <input type="text"/>	No ²² <input type="radio"/>
C7 INTERVIEWER: Total the number of accidents reported in C2 to C6 and enter → TCTAL			<input type="text"/>
C8 Did you drive any motor vehicle during 1987? (Include car, van, truck or motorcycle)			
Yes ¹ <input type="radio"/> No ² <input type="radio"/> → Go to C10			
C9. As a driver of a motor vehicle, what is your best estimate of the number of miles or kilometres you drove in 1987?			
Miles ³ <input type="radio"/> } → Enter number → <input type="text"/> Kilometres ⁴ <input type="radio"/> }			
C10. During the last seven days, approximately how many hours have you spent as:			
a) A driver of a car, van, truck or motorcycle? → <input type="text"/> hours (If none enter 00)			
b) A passenger of a car, van, truck or motorcycle? → <input type="text"/> hours (If none enter 00)			
C11. In order to determine your longer term exposure to accidents, the next four questions ask about the type of accidents you have had during the last three years, that is, during the period since January 1985.			
Number of times in last three years			
a) How many times did you have an accident involving any type of vehicle? (Include motor vehicle, recreational vehicle and bicycle)	<input type="text"/>	or None	⁰⁰ <input type="radio"/>
b) (Excluding accidents involving vehicles,) how many times did you have an accident while working at a job or business during the last three years?	<input type="text"/>	or None	⁰⁰ <input type="radio"/>
c) (Excluding vehicle and work related accidents,) how many times were you hurt or injured while playing games or participating in sports?	<input type="text"/>	or None	⁰⁰ <input type="radio"/>
d) How many other accidents did you have during the last three years, such as those involving falls, burns, poisons, cuts, etc.?	<input type="text"/>	or None	⁰⁰ <input type="radio"/>

SECTION D		
D1 The next few questions ask about some things which may have happened to you during 1987.		
	Yes	How many in 1987?
D2 From January 1st to December 31st 1987:		No
a) Did anyone take or try to take something from you by force or threat of force?	Yes ⁰¹ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ⁰² <input type="radio"/>
b) (Other than the incidents already mentioned), did anyone illegally break into or attempt to break into your residence or any other building on your property?	Yes ⁰³ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ⁰⁴ <input type="radio"/>
D3. Now I'm going to ask you a question about being attacked. An attack can be anything from being hit, slapped, pushed or grabbed, to being shot, raped or beaten.		
a) (Excluding incidents already mentioned,) were you attacked by anyone at all, including members of your own household?	Yes ⁰⁵ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ⁰⁶ <input type="radio"/>
b) (Other than the incidents already mentioned), did anyone, including members of your own household, threaten to hit or attack you, or threaten you with a weapon?	Yes ⁰⁷ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ⁰⁸ <input type="radio"/>
D4. During 1987, did you or anyone in your household own a motor vehicle such as a car, truck, motorcycle, etc.?		
Yes ¹ <input type="radio"/> No ² <input type="radio"/> → Go to D6		
D5. (Other than the incidents already mentioned:)		
a) Did anyone steal or try to steal one of these vehicles or a part of one of them, such as a battery, hubcap or radio?	Yes ⁰⁹ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ¹⁰ <input type="radio"/>
b) (Other than the incidents already mentioned), did anyone deliberately damage one of these vehicles, such as slashing tires?	Yes ¹¹ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ¹² <input type="radio"/>
D6. (Excluding the incidents already mentioned,) was anything of yours stolen during 1987:		
a) From the things usually kept outside your home, such as yard furniture?	Yes ¹³ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ¹⁴ <input type="radio"/>
b) From your place of work, from school or from a public place, such as a restaurant?	Yes ¹⁵ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ¹⁶ <input type="radio"/>
c) From a hotel, vacation home, cottage, car, truck or while travelling? .	Yes ¹⁷ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ¹⁸ <input type="radio"/>
D7. (Excluding the incidents already mentioned,) during 1987, did anyone steal or try to steal anything else that belonged to you?		
	Yes ¹⁹ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ²⁰ <input type="radio"/>
D8. (Other than the incidents already mentioned,) did anyone deliberately damage or destroy any property belonging to you or anyone in your household, such as a window or a fence?		
	Yes ²¹ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ²² <input type="radio"/>
D9. Were there any other crimes which happened to you during 1987, which may or may not have been reported to the police?		
	Yes ²³ <input type="radio"/> → <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>	No ²⁴ <input type="radio"/>
D10. INTERVIEWER: Total the number of incidents reported in D2 to D9 and enter → TOTAL		1 <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div>
D11. In order to determine your longer term exposure to crime, the next question concerns incidents which happened to you in the last three years. In total, how many crimes happened to you since January 1st 1985?		
2 <div style="display: inline-block; width: 40px; border-bottom: 1px solid black; text-align: center;"> </div> or None ⁰⁰ <input type="radio"/>		
D12. INTERVIEWER: COMPLETE THE NUMBER OF ACCIDENT AND CRIME INCIDENT REPORTS, AS GIVEN BY TOTAL BOXES ON PAGES 6 AND 7		

SECTION E

E1. **INTERVIEWER:** Complete this section immediately after completing your interview with the selected household member.

E2. ACCIDENT REPORTS

Total number of accidents reported in C7	Total number of form GSS 3-3
<div style="border: 1px solid black; display: inline-block; width: 20px; height: 20px; text-align: center; line-height: 20px;">1</div> <div style="border: 1px solid black; display: inline-block; width: 20px; height: 20px; text-align: center; line-height: 20px;"></div> <div style="border: 1px solid black; display: inline-block; width: 20px; height: 20px; text-align: center; line-height: 20px;"></div>	<div style="border: 1px solid black; display: inline-block; width: 20px; height: 20px; text-align: center; line-height: 20px;">2</div> <div style="border: 1px solid black; display: inline-block; width: 20px; height: 20px; text-align: center; line-height: 20px;"></div> <div style="border: 1px solid black; display: inline-block; width: 20px; height: 20px; text-align: center; line-height: 20px;"></div>

E3. Are the numbers in E2 equal?

Yes ☐

No $^2\text{O} \longrightarrow$ Why are they not equal?
(Mark all that apply)

SERIES ACCIDENT report(s) included

³O

NO INFORMATION COLLECTED – MULTIPLE
report(s) included

4 ○

Other

5 ○

(specify)

E4. CRIME INCIDENT REPORTS

Total number of crime incidents reported in D10	Total number of form GSS 3-4
<div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;">1</div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;"></div>	<div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;">2</div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;"></div> <div style="border: 1px solid black; display: inline-block; width: 30px; height: 30px; text-align: center; line-height: 30px;"></div>

E5. Are the numbers in E4 equal?

Yes ¹ ☐

No $^2\text{O} \longrightarrow$ Why are they not equal?
(Mark all that apply)

SERIES INCIDENT report(s) included

 ^3O

NO INFORMATION COLLECTED – MULTIPLE
report(s) included

40

Other

5 ○

(specify)

99. COMMENTS:

Blank lined paper for writing.

General Social Survey – Accident Report

Confidential when completed

GSS 3 - 3

F1. IDENTIFICATION	REPORT STATUS
<p>TELEPHONE NUMBER - - </p> <p>ACCIDENT REPORT No. </p> <p>SCREEN QUESTION No. </p>	<p>F38. INTERVIEWER: What is the status of this Accident Report?</p> <div style="display: flex; justify-content: space-between;"> <div> <p>SINGLE ACCIDENT REPORT</p> <p>SERIES ACCIDENT REPORT</p> <p>DUPLICATE ACCIDENT REPORT</p> <p>OUT OF SCOPE (date, definition)</p> <p>NO INFORMATION COLLECTED – SINGLE</p> <p>NO INFORMATION COLLECTED – MULTIPLE</p> <p>None of the above</p> </div> <div style="text-align: right;"> <p>1 <input type="radio"/></p> <p>2 <input type="radio"/></p> <p>3 <input type="radio"/></p> <p>4 <input type="radio"/></p> <p>5 <input type="radio"/></p> <p>6 <input type="radio"/></p> <p>7 <input type="radio"/></p> <p>↓</p> <p>(Specify)</p> </div> </div>
<p>F2. You said that during 1987 ... (refer to appropriate screen question for description of accident). In what month did (this/the most recent) accident happen?</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <p>In 1987</p> </div> <div> <p>January 01 <input type="radio"/></p> <p>February 02 <input type="radio"/></p> <p>March 03 <input type="radio"/></p> <p>April 04 <input type="radio"/></p> <p>May 05 <input type="radio"/></p> <p>June 06 <input type="radio"/></p> <p>July 07 <input type="radio"/></p> <p>August 08 <input type="radio"/></p> <p>September 09 <input type="radio"/></p> <p>October 10 <input type="radio"/></p> <p>November 11 <input type="radio"/></p> <p>December 12 <input type="radio"/></p> <p>Don't know 13 <input type="radio"/></p> <p>Not in 1987 14 <input type="radio"/> → Go to F38 on this page</p> </div> </div>	<p>F39. INTERVIEWER: Is this the last Accident Report to be filled out?</p> <p>Yes 8 <input type="radio"/></p> <p>No 9 <input type="radio"/> → Go to next Accident Report</p> <p>F40. INTERVIEWER: Are there any Crime Incident Reports to be filled out?</p> <p>Yes 1 <input type="radio"/> → Go to first Crime Incident Report</p> <p>No 2 <input type="radio"/> → Thank respondent, end interview and complete Section E, GSS 3-2</p>
<p>F3. About what time of the day did it happen?</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <p>During the day:</p> </div> <div> <p>8 a.m. – 12 noon 1 <input type="radio"/></p> <p>12 noon – 6 p.m. 2 <input type="radio"/></p> <p>Don't know 3 <input type="radio"/></p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"> <p>At night:</p> </div> <div> <p>6 p.m. – 12 midnight 4 <input type="radio"/></p> <p>12 midnight – 8 a.m. 5 <input type="radio"/></p> <p>Don't know 6 <input type="radio"/></p> </div> </div> <p>Don't know 7 <input type="radio"/></p>	<p>F5. In which province or territory?</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Newfoundland</p> <p>Prince Edward Island</p> <p>Nova Scotia</p> <p>New Brunswick</p> <p>Quebec</p> <p>Ontario</p> <p>Manitoba</p> <p>Saskatchewan</p> <p>Alberta</p> <p>British Columbia</p> <p>Yukon Territory</p> <p>Northwest Territories</p> </div> <div style="text-align: right;"> <p>01 <input type="radio"/></p> <p>02 <input type="radio"/></p> <p>03 <input type="radio"/></p> <p>04 <input type="radio"/></p> <p>05 <input type="radio"/></p> <p>06 <input type="radio"/></p> <p>07 <input type="radio"/></p> <p>08 <input type="radio"/></p> <p>09 <input type="radio"/></p> <p>10 <input type="radio"/></p> <p>11 <input type="radio"/></p> <p>12 <input type="radio"/></p> </div> </div>
<p>F4. Did this accident take place in Canada?</p> <p>Yes 8 <input type="radio"/></p> <p>No 9 <input type="radio"/> → Go to F7</p>	<p>F6. Did this incident take place in a city, town, village or a rural area?</p> <div style="display: flex; justify-content: space-between;"> <div> <p>City 1 <input type="radio"/></p> <p>Town 2 <input type="radio"/></p> <p>Village 3 <input type="radio"/></p> <p>Rural area 4 <input type="radio"/></p> </div> </div> <p>F7. Did this accident involve a motor vehicle such as a car, van, truck, motorcycle, snowmobile or an All Terrain Vehicle (ATV)?</p> <p>Yes 5 <input type="radio"/></p> <p>No 6 <input type="radio"/> → Go to F10</p>

<p>F8 At the time of the accident, were you a pedestrian, on a bicycle, or in a motor vehicle?</p> <p>Not present <input type="radio"/> 1</p> <p>Pedestrian <input type="radio"/> 2</p> <p>Bicycle <input type="radio"/> 3</p> <p>Motor vehicle <input type="radio"/> 4 → What type of motor vehicle?</p> <p>Car, van or truck <input type="radio"/> 5</p> <p>Motorcycle <input type="radio"/> 6</p> <p>Recreational vehicle <input type="radio"/> 7</p> <p>Other <input type="radio"/> 8</p> <p style="text-align: right;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<p>F15. Where did this accident take place? For example, was it at home, on a street or at school? (Mark all that apply)</p> <p>Inside respondent's own home/apartment <input type="radio"/> 17</p> <p>Inside garage or other building on respondent's property <input type="radio"/> 18</p> <p>Inside vacation home <input type="radio"/> 19</p> <p>Outside respondent's home, including yard, driveway or in shared areas related to home such as apartment hallway or laundry room <input type="radio"/> 20</p> <p>In parking lot of respondent's home/apartment <input type="radio"/> 21</p> <p>In other parking lot <input type="radio"/> 22</p> <p>On sidewalk/street/highway in respondent's neighbourhood <input type="radio"/> 23</p> <p>On any other sidewalk/street/highway <input type="radio"/> 24</p> <p>In a restaurant or bar <input type="radio"/> 25</p> <p>Inside school or on school grounds <input type="radio"/> 26</p> <p>In a hospital, prison or rehabilitation centre <input type="radio"/> 27</p> <p>In a commercial or office building or a factory <input type="radio"/> 28</p> <p>At an indoor or outdoor sports facility <input type="radio"/> 29</p> <p>In a park (include national, provincial or local park, or conservation area) <input type="radio"/> 30</p> <p>In a rural area <input type="radio"/> 31</p> <p>Elsewhere <input type="radio"/> 32</p> <p style="text-align: right;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
<p>F9 Were any other pedestrians, bicycles or motor vehicles involved in this accident?</p> <p>Yes <input type="radio"/> 1 → What were they? (Mark all that apply)</p> <p>Pedestrian <input type="radio"/> 2</p> <p>Bicycle <input type="radio"/> 3</p> <p>Car, van or truck <input type="radio"/> 4</p> <p>Motorcycle <input type="radio"/> 5</p> <p>Recreational vehicle <input type="radio"/> 6</p> <p>Other <input type="radio"/> 7</p> <p style="text-align: right;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<p>F16 Did this accident result in any injury to you?</p> <p>Yes <input type="radio"/> 1</p> <p>No <input type="radio"/> 2 → Go to F23</p>
<p>F10 Did this accident happen at your place of work?</p> <p>Yes <input type="radio"/> 3</p> <p>No <input type="radio"/> 4 → Go to F13</p>	<p>F17 What type of injury? Was it (Mark all that apply)</p> <p>Broken or fractured bone(s) <input type="radio"/> 1</p> <p>Burn or scald <input type="radio"/> 2</p> <p>Dislocation, sprain, strain or bruise <input type="radio"/> 3</p> <p>Cut or scrape <input type="radio"/> 4</p> <p>Loss of consciousness <input type="radio"/> 5</p> <p>Poisoning by substance or liquid <input type="radio"/> 6</p> <p>Internal injury <input type="radio"/> 7</p> <p>Other <input type="radio"/> 8</p> <p style="text-align: right;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
<p>F11 Did you apply for Workers Compensation?</p> <p>Yes <input type="radio"/> 1</p> <p>No <input type="radio"/> 2</p>	<p>F18 Where were you injured? Was it your? (Mark all that apply)</p> <p>Eyes <input type="radio"/> 1</p> <p>Head or neck (excluding eyes) <input type="radio"/> 2</p> <p>Arms or hands <input type="radio"/> 3</p> <p>Legs or feet <input type="radio"/> 4</p> <p>Back or spine <input type="radio"/> 5</p> <p>Trunk (excluding back or spine)? (Include shoulder, chest, internal organs, etc.) <input type="radio"/> 6</p>
<p>F12 INTERVIEWER Go to F15</p>	
<p>F13 Did this accident occur when you were participating in a sport or recreational activity?</p> <p>Yes <input type="radio"/> 1</p> <p>No <input type="radio"/> 2 → Go to F15</p>	
<p>F14. What sport or recreational activity were you participating in at the time?</p> <p>Baseball <input type="radio"/> 01</p> <p>Basketball <input type="radio"/> 02</p> <p>Boating <input type="radio"/> 03</p> <p>Cycling <input type="radio"/> 04</p> <p>Football <input type="radio"/> 05</p> <p>Ice hockey <input type="radio"/> 06</p> <p>Racquetball or squash <input type="radio"/> 07</p> <p>Running or jogging <input type="radio"/> 08</p> <p>Skiing <input type="radio"/> 09</p> <p>Soccer <input type="radio"/> 10</p> <p>Swimming <input type="radio"/> 11</p> <p>Tennis <input type="radio"/> 12</p> <p>Other <input type="radio"/> 13</p> <p style="text-align: right;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	

F36. INTERVIEWER: Briefly summarize this accident or series of accidents.

F37. INTERVIEWER: Go to F38 on front page of this form.

General Social Survey – Crime Incident Report

Confidential when completed

GSS 3 – 4

G1. IDENTIFICATION	REPORT STATUS
<p>TELEPHONE NO. []-[]-[]-[]-[]-[]-[]-[]-[]-[]-[]-[]</p> <p>CRIME INCIDENT REPORT NO. []-[]-[]</p> <p>SCREEN QUESTION NO. [D][]-[]-[]</p>	<p>G65. INTERVIEWER: What is the status of this Incident Report?</p> <p>SINGLE INCIDENT REPORT 1 <input type="radio"/></p> <p>SERIES INCIDENT REPORT 2 <input type="radio"/></p> <p>DUPLICATE INCIDENT REPORT 3 <input type="radio"/></p> <p>OUT OF SCOPE (Date, respondent not victim) 4 <input type="radio"/></p> <p>NO INFORMATION COLLECTED – SINGLE 5 <input type="radio"/></p> <p>NO INFORMATION COLLECTED – MULTIPLE 6 <input type="radio"/></p> <p>None of the above 7 <input type="radio"/></p> <p style="text-align: right;">↓ (Specify)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>G2. You said that during 1987 . . . (refer to appropriate screen question for description of incident). In what month did (this/the most recent) incident happen?</p> <p>January 01 <input type="radio"/></p> <p>February 02 <input type="radio"/></p> <p>March 03 <input type="radio"/></p> <p>April 04 <input type="radio"/></p> <p>May 05 <input type="radio"/></p> <p>June 06 <input type="radio"/></p> <p>In 1987 July 07 <input type="radio"/></p> <p>August 08 <input type="radio"/></p> <p>September 09 <input type="radio"/></p> <p>October 10 <input type="radio"/></p> <p>November 11 <input type="radio"/></p> <p>December 12 <input type="radio"/></p> <p>Don't know 13 <input type="radio"/></p> <p>Not in 1987 14 <input type="radio"/> → Go to G65 on this page</p>	<p>G66. INTERVIEWER: Is this the last Crime Incident Report to be filled out?</p> <p>Yes 8 <input type="radio"/> → Thank respondent, end interview and complete Section E, GSS 3-2.</p> <p>No 9 <input type="radio"/> → Go to next Crime Incident Report.</p>
<p>G3. About what time of the day did it happen?</p> <p>During the day { 8:00 a.m. – 12 noon 1 <input type="radio"/></p> <p> { 12 noon – 6 p.m. 2 <input type="radio"/></p> <p> { Don't know 3 <input type="radio"/></p> <p>At night { 6 p.m. – 12 midnight 4 <input type="radio"/></p> <p> { 12 midnight – 8 a.m. 5 <input type="radio"/></p> <p> { Don't know 6 <input type="radio"/></p> <p>Don't know 7 <input type="radio"/></p>	<p>G4. Did this incident take place in Canada?</p> <p>Yes 8 <input type="radio"/></p> <p>No 9 <input type="radio"/> → Go to G7</p> <p>G5. In which province or territory?</p> <p>Newfoundland 01 <input type="radio"/></p> <p>Prince Edward Island 02 <input type="radio"/></p> <p>Nova Scotia 03 <input type="radio"/></p> <p>New Brunswick 04 <input type="radio"/></p> <p>Quebec 05 <input type="radio"/></p> <p>Ontario 06 <input type="radio"/></p> <p>Manitoba 07 <input type="radio"/></p> <p>Saskatchewan 08 <input type="radio"/></p> <p>Alberta 09 <input type="radio"/></p> <p>British Columbia 10 <input type="radio"/></p> <p>Yukon Territory 11 <input type="radio"/></p> <p>Northwest Territories 12 <input type="radio"/></p>
<p>G6. Did this incident take place in a city, town, village or a rural area?</p> <p>City 1 <input type="radio"/></p> <p>Town 2 <input type="radio"/></p> <p>Village 3 <input type="radio"/></p> <p>Rural area 4 <input type="radio"/></p>	

<p>G11. What type of dwelling were you living in at the time of this incident? Was it a ...</p> <p>Single detached house? 3 <input type="radio"/></p> <p>Semi-detached or double (side-by-side)? 4 <input type="radio"/></p> <p>Garden house, town-house or row house? 5 <input type="radio"/></p> <p>Duplex (one above the other)? 6 <input type="radio"/></p> <p>Low-rise apartment (less than 5 stories)? 7 <input type="radio"/></p> <p>High-rise apartment (5 or more stories)? 8 <input type="radio"/></p> <p>Other 9 <input type="radio"/></p> <p style="text-align: center;">↓</p> <p style="text-align: center;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<p>G18. Did the person(s) who committed the act have a weapon, such as a gun or knife or something he/she was using as a weapon, such as a rock or bottle?</p> <p>Yes 3 <input type="radio"/></p> <p>No 4 <input type="radio"/></p> <p>Don't know 5 <input type="radio"/></p>
<p>G12. At the time of the incident, did the person(s) who committed the act actually live there?</p> <p>Yes 1 <input type="radio"/> → Go to G16</p> <p>No 2 <input type="radio"/></p> <p>Don't know 3 <input type="radio"/> → Go to G16</p>	<p>G19. An attack can be anything from being hit, slapped, grabbed or knocked down, to being shot, raped or beaten up. Were you attacked in any way during the incident?</p> <p>Yes 6 <input type="radio"/> → Go to G21</p> <p>No 7 <input type="radio"/></p>
<p>G13. Did someone let him/her/them in? (Example: guests, workmen)</p> <p>Yes 4 <input type="radio"/> → Go to G16</p> <p>No 5 <input type="radio"/></p>	<p>G20. Did the person(s) threaten you with harm in any way?</p> <p>Yes 8 <input type="radio"/> } Go to G25</p> <p>No 9 <input type="radio"/> }</p>
<p>G14. Did the person who committed the act actually get in or just try to get in?</p> <p>Actually got in 6 <input type="radio"/></p> <p>Tried to get in 7 <input type="radio"/></p> <p>Don't know 8 <input type="radio"/></p>	<p>G21. How were you attacked? (Mark all that apply)</p> <p>Raped, molested or attempt to rape or molest ... 1 <input type="radio"/></p> <p>Shot, knifed or hit with object held in hand 2 <input type="radio"/></p> <p>Hit, kicked, slapped, knocked down 3 <input type="radio"/></p> <p>Grabbed, held, tripped, jumped, pushed 4 <input type="radio"/></p> <p>Other 5 <input type="radio"/></p> <p style="text-align: center;">↓</p> <p style="text-align: center;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
<p>G15. Was there any evidence such as a broken lock or window that the person(s) (forced/tried to force) his/her way in?</p> <p>Yes 1 <input type="radio"/> → What was the evidence? (Mark all that apply)</p> <p style="margin-left: 40px;">Broken lock or forced door 4 <input type="radio"/></p> <p style="margin-left: 40px;">Broken or forced window 5 <input type="radio"/></p> <p style="margin-left: 40px;">Other 6 <input type="radio"/></p> <p style="text-align: center;">↓</p> <p style="text-align: center;">(Specify)</p> <div style="border: 1px solid black; height: 20px; width: 100%; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<p>G22. Did you receive any medical attention at a hospital as a result of this incident?</p> <p>Yes 6 <input type="radio"/> → Did you stay in hospital overnight?</p> <p style="margin-left: 100px;">Yes 8 <input type="radio"/> → For how many nights?</p> <p style="margin-left: 100px;">No 9 <input type="radio"/> →</p> <p style="margin-left: 100px;">No 7 <input type="radio"/></p> <p style="margin-left: 100px;">} Go to G24</p>
<p>G16. INTERVIEWER: Was the respondent present at any time during the incident?</p> <p>Yes 7 <input type="radio"/> → Go to G18</p> <p>No 8 <input type="radio"/> → Go to G34</p> <p>Don't know 9 <input type="radio"/></p>	<p>G23. Did you receive any medical attention from a doctor or a nurse?</p> <p>Yes 1 <input type="radio"/></p> <p>No 2 <input type="radio"/></p> <p>Don't know 3 <input type="radio"/></p>
<p>G17. Were you present at any time during the incident?</p> <p>Yes 1 <input type="radio"/></p> <p>No 2 <input type="radio"/> → Go to G34</p>	<p>G24. As a result of this incident, did you have to stay in bed for all or most of a day?</p> <p>Yes 4 <input type="radio"/> → For how many days? </p> <p>No 5 <input type="radio"/></p>
<p>G18. Did the person(s) who committed the act have a weapon, such as a gun or knife or something he/she was using as a weapon, such as a rock or bottle?</p> <p>Yes 3 <input type="radio"/></p> <p>No 4 <input type="radio"/></p> <p>Don't know 5 <input type="radio"/></p>	<p>G25. Was only one person involved in committing the act?</p> <p>Yes 6 <input type="radio"/></p> <p>No 7 <input type="radio"/> → Go to G30</p> <p>Don't know 8 <input type="radio"/> → Go to G34</p>

APPENDIX III

Sample Design and Estimation Procedures

APPENDIX III.

SAMPLE DESIGN AND ESTIMATION PROCEDURES

POPULATION

The target population of the 1988 General Social Survey includes all persons 15 years and over living in Canada, with the following exceptions:

1. full-time residents of institutions;
2. residents of the Yukon and Northwest Territories.

Since random digit dialling techniques were used to select households, households (thus persons living in households) that did not have telephones at the time of the survey were excluded from the surveyed population. These households account for less than 3% of the total population.

The survey estimates have been adjusted (weighted) to represent the entire target population, including persons without telephones and other exclusions.

SAMPLE DESIGN AND SELECTION METHODS

The 1988 General Social Survey employed two different Random Digit Dialling (RDD) sampling techniques. For Newfoundland and Ontario, the Elimination of Non-working Banks method was used while, for the remaining provinces, the Waksberg method was used¹. Both of these methods are described below.

Note that a "bank" of telephone numbers is a group of 100 possible numbers that share the same three-digit area code, three digit prefix and first two digits of the final part of the telephone number.

Elimination of Non-working Banks RDD Design

The following description describes the Elimination of Non-working Banks (ENWB) design which was used to sample for the GSS in Newfoundland and Ontario.

ENWB is a form of Random Digit Dialling in which an attempt is made to identify all "working banks" for an area, i.e. to identify all banks with at least one household. Working banks were identified using telephone company lists and all possible 10-digit telephone numbers were generated for these banks. A systematic sample of telephone numbers was then generated for each stratum

and an attempt was made to conduct a GSS interview with one randomly selected person from each household reached.

Waksberg RDD Design

Prince Edward Island	Nova Scotia
New Brunswick	Quebec
Manitoba	Saskatchewan
Alberta	British Columbia

The Waksberg method employs a two-stage design which increases the likelihood of contacting households over a "pure" RDD design. The following describes the procedure used for the General Social Survey in the above provinces.

For each stratum within each of these provinces, an up-to-date list of all telephone area code and prefix number combinations was obtained. Within each identified area code-prefix combination, all possible combinations of the next two digits were added to form the 100 possible banks. These banks formed the first stage sampling units (i.e. the Primary Sampling Units - PSUs).

Within each stratum, random selections were made of these banks and then the final two digits were generated at random. This number (called a "Primary" number) was called to determine whether or not it reached a household. If it did not reach a household (i.e. the number was not assigned for use or was a business, institution, etc.), the number was dropped from further consideration. If it did reach a household, additional numbers referred to as "Secondary" numbers were generated within the same bank (i.e. numbers with the same first eight digits as the "Primary" number). These numbers were also called to determine whether or not they reached a household. Secondary numbers were generated on a continuing basis until:

- (a) five additional households were reached in each retained bank; or
- (b) the bank was exhausted; or
- (c) the survey period ended.

An attempt was made to conduct an interview with a randomly selected respondent in all "Primary" and "Secondary" households reached.

Stratification

In order to carry out sampling, each of the provinces with the exception of Prince Edward Island was divided into strata or geographic areas. Generally, for each province, one stratum represented the census metropolitan areas

(CMAs) of the province and the other, the non-CMAs. Since Ontario and Saskatchewan are each sampled from two regional offices, more strata were included in the sample design for these areas.

The area code and prefix combinations that corresponded to the strata were determined and used to select the appropriate samples in each stratum. Since area code-prefix boundaries did not always correspond exactly to the intended stratum boundaries, small biases may have been introduced at this stage.

A target sample size of approximately 10,000 households was chosen as being large enough to allow extensive analysis at the national level and limited analysis at a provincial level. It was allocated to provinces in proportion to the square root of their populations and to the strata within provinces in proportion to their populations.

WEIGHTING AND ESTIMATION

Person Weights

For both the Waksberg design and the Elimination of Non-working Banks design, each household within a stratum has an equal probability of selection. For the Waksberg households, the initial weight is set to a constant (1.0) for all records. For ENWB households the initial weight is equal to the total number of telephone numbers in the stratum divided by the number of sampled telephone numbers in the stratum.

The initial weight is adjusted, by stratum, for non-response and households which had more than one telephone number have a second adjustment to produce the person weight. The second adjustment corrects for the higher probability of households with more than one telephone number being sampled.

Subsequently, these "person weights" were adjusted within strata so that the estimated population sizes for the strata would agree with census projections of the population. In the final stages of sampling, the weights

were adjusted for over- or under-sampling within province-sex-age groups, again using census projections for the target population. The age groups for this adjustment were:

15-19	20-24	25-29	30-34	35-39	40-44
45-49	50-54	55-59	60-64	65-69	70+

Incident Weights

The final person weight became the basic incident weight. Each of the accident incident reports can represent either a single incident report or a series of accident incidents. More information on series weights can be obtained in General Social Survey Working Paper #2².

Estimation

The estimate of the number of persons (incidents) in the population having a given set of characteristics is determined by summing the weights of all sampled persons(incidents) with that set of characteristics. The estimates of persons(incidents) presented in the tables are rounded to the nearest thousand, which not only improves readability but also provides data at an appropriate level of precision.

NOTES

1. J. Waksberg, 1980. "Sampling Methods for Random Digit Dialling." *Journal of the American Statistical Association*, 73: 40-46.
2. K., Murphy, D., Paton, E. Praught, January, 1989. General Social Survey Working Paper # 2, Guidelines For Working With Cycle Three Normalized Record Structure Files and Its Multiple Weighting Factors. Ottawa: Statistics Canada.

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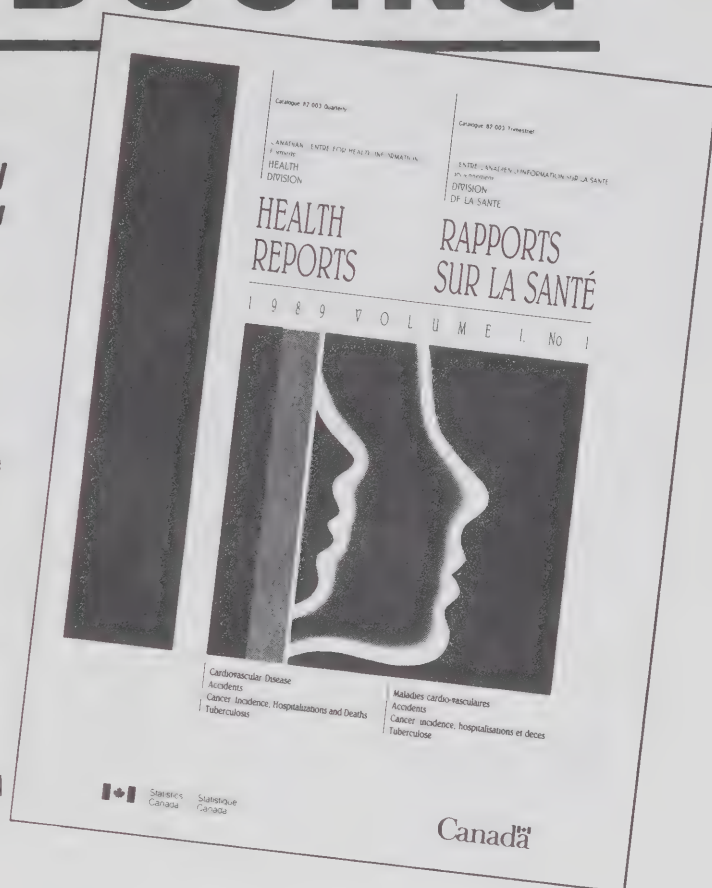
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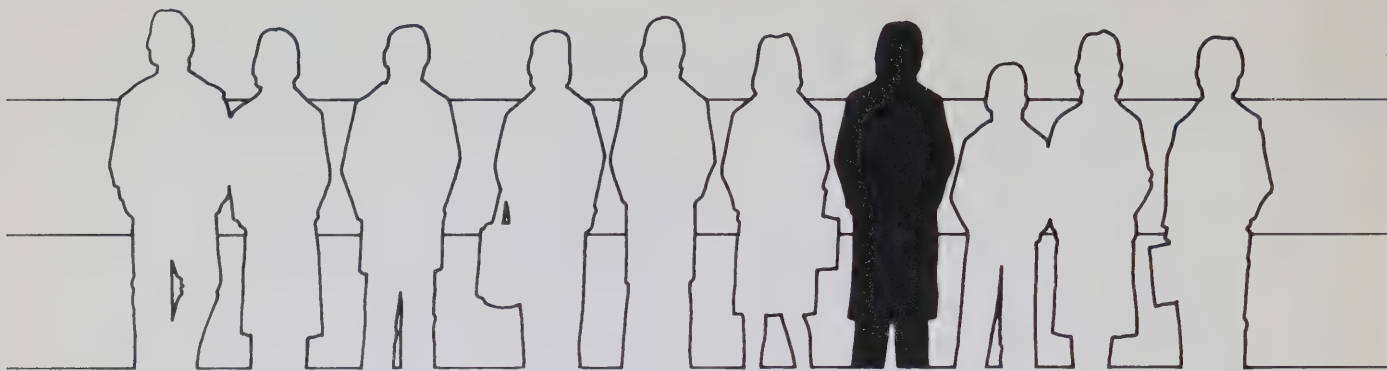
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